TRANSCRIPT OF RECORD.

SUPREME COURT OF THE UNITED STATES.

OCTOBER TERM, 1[redacted] 1919

No. [redacted]

THE UNITED STATES OF AMERICA, APPELLANT,

vs.

UNITED STATES STEEL CORPORATION ET AL.

APPEAL FROM THE DISTRICT COURT OF THE UNITED STATES FOR THE DISTRICT OF NEW JERSEY.

VOLUME 16.

DEFENDANTS' TESTIMONY.

FILED MAY 16, 1[redacted]

(25292)

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Erratum. On page 6227, line 33, the word "percentage" should be "tonnage."

EIGHTY-SIXTH DAY.

EMPIRE BUILDING,
71 BROADWAY, NEW YORK CITY,

WEDNESDAY, OCTOBER 1, 1913.

Before Special Examiner HENRY P. BROWN.

Present on behalf of the United States, MR. DICKINSON and MR. COLTON.

Present on behalf of the Defendants, MR. LINDABURY, MR. SEVERANCE, MR. BOLLING and MR. REED.

Present on behalf of the Great Northern Iron Ore Interests, MR. CHESTER W. CUTHELL.

C. K. LEITH

was called as a witness on behalf of the Defendants, and being first duly sworn, testified as follows:

DIRECT EXAMINATION

By MR. REED:

Q. Dr. Leith, where is your home?

A. Madison, Wisconsin.

Q. What is your occupation?

A. Geologist.

Q. Have you any connection with any of the universities?

A. With the University of Wisconsin and the University of Chicago.

Q. What chair do you occupy in the University of Wisconsin?

A. Professor of Geology.

Q. How long have you been Professor of Geology there?

A. Nine years as I recall.

Q. And in the University of Chicago what chair have you and how long have you had it?

A. I have been eight years non-resident Professor of Structural Geology.

Q. You lecture there at the University of Chicago, do you?

A. On alternate years, yes.

Q. Have you had any connection with the Michigan Tax Commission?

A. I have.

Q. What was that?

A. I served as expert for the Commission in the valuation of Michigan iron mines during the years 1911 and 1912.

Q. Did this Michigan Tax Commission during that time include in its membership any mining engineers or geologists?

A. No.

Q. I believe it is already shown in this case that they have the duty of assessing property of all kinds throughout the State of Michigan?

A. Yes.

Q. That is correct, is it?

A. Yes.

Q. To whom, then, was the assessment of the iron ores deputed during that time?

A. To myself.

Q. Have you had any connection with the Wisconsin Tax Commission, and if so, what, and when was it?

A. During the year 1912 I served in an advisory capacity to the Wisconsin State Tax Commission in the valuation of the iron mines of northern Wisconsin.

Q. And I suppose your work there was substantially similar to that that you did in Michigan?

A. Yes.

Q. Have you had any connection with the United States Geological Survey?

A. Yes.

Q. What was, or what is that, if it still exists?

A. Beginning in 1897 I was more or less continuously engaged in work for the United States Geological Survey on the iron ranges of Lake Superior. That work was continued until 1910.

Q. Have you done any work since then for the Survey?

A. Yes; I have published several small reports through the Survey on the basis of work done for the Survey.

Q. Did you have any connection with the authorship of Monograph 52 of the Survey?

A. Yes.

Q. What is that monograph?

A. It is a general summary of the geology of the Lake Superior Region based on the detailed surveys made by the United States Geological Survey and others during the preceding twenty-five years.

Q. That is the most important work issued by the Survey on Lake Superior ores, is it not?

A. I think so, yes.

Q. Who were the authors of that?

A. President Van Hise and myself.

Q. President Van Hise of the University of Wisconsin?

A. Yes, sir.

Q. In addition to this monograph, have you been the author of any of the annual iron ore reports of the Survey? I do not know what their exact title is.

A. Yes. From time to time I have contributed to the Mineral Resource Volume, and also to their series technically called the annual reports, on different phases of the iron ore development of Lake Superior.

Q. In addition to this work in universities and with the tax commissions, and with the United States Geological Survey, have you served any private interests?

A. I have.

Q. In what capacity?

A. As consulting geologist.

Q. In what parts of the Lake Superior District?

A. In all parts.

Q. Throughout all the different ranges?

A. Through all the ranges, yes.

Q. In the Michigan ranges and in the Vermillion range the ore lies differently from the way in which it lies in the Mesabi, does it not?

A. Yes.

Q. I wish you would describe the difference?

A. The ore in each of the Lake Superior districts lies in what is called an iron formation. The ore constitutes only a very small percentage of the iron formation. In the Mesabi district this iron formation lies nearly flat, with the result that exploration goes vertically across the formation, whereas in the other ranges, in Michigan and Minnesota, the formation is very largely tilted up, stands steeply, almost on edge, and has been folded.

Q. Does that difference in the nature of the deposit make any difference in the ease with which the ore of the different ranges can be measured?

A. Yes.

Q. In which range is it possible to learn the full extent of the iron deposit with the greatest ease?

A. The Mesabi range of Minnesota.

Q. Is it possible to measure the Minnesota ores in the Mesabi district with any accuracy?

A. Yes, with a fairly close degree of accuracy.

Q. Is it possible to measure the total ores in the Old Range, the Michigan ranges, with the same accuracy?

A. No.

Q. In the estimates made by these Tax Commissions, is it customary to assess the ore and estimate the ore down to the lowest levels to which it is reasonably certain the ore goes, or is there an arbitrary depth taken as the limit of the ore?

A. An arbitrary depth is taken of usually 100 feet below the lowest developed level, or equivalent to one additional level.

Q. Is it reasonable or is it scientific to assume that the ore stops at that arbitrary level that is taken by the Tax Commissions?

A. No.

Q. Has it been proven in the past that it did or did not stop there?

A. It has been proven many times that it did not stop there, but for tax purposes some limit more or less arbitrary is put on the ore body.

Q. I would like to direct your attention particularly to

the three ranges in Michigan, the Gogebic, Marquette and Menominee, and ask you whether, as this ore goes to greater depths, as a general thing it depreciates in quality?

A. No, as a general thing.

Q. In some cases it does?

A. Individual cases, yes; but not as a general thing.

Q. In general, do the veins diminish in thickness?

A. No.

Q. Then, for all practical purposes, for commercial purposes, is the ore at these greater depths as good as it is in the upper levels?

A. Yes.

Q. Are there any practical reasons why the ore at those greater depths cannot be commercially mined?

A. None that I know of.

Q. How deep do the deepest workings in the Michigan ranges go now?

A. One mine has a maximum depth of 2,700 feet, another one a maximum depth of 2,400 feet. The average for Michigan is in the neighborhood of 1,000 feet.

Q. In those two mines that run 2,400 feet and 2,700 feet, have the quantity and quality of the ore kept up as greater depths were reached?

A. Yes, fully; and in one case increased.

Q. In which case?

A. The Newport, to a depth of 2,400 feet.

Q. In what geological series do those Michigan ranges lie?

A. They lie in two geological series, the so-called Upper Huronian and the Middle Huronian series. The larger part of the ore is in the Upper Huronian series.

Q. Is that series extensive?

A. Very; it is the most extensive in the Lake Superior series.

Q. Has it all been explored?

A. No.

Q. About what percentage of it has been explored for iron ore?

A. I have estimated somewhere in the neighborhood of

ten per cent. of the Upper Huronian series has been explored for iron ore.

Q. Has there been for any considerable period in the past a theory among geologists that further exploration of the series would or would not yield iron ore?

A. Yes. It has been regarded as practically certain both by geologists and by the mining men with whom they have been associated that there would be the same returns or similar returns in exploring the remainder of this series that there have been in exploring the part already uncovered.

Q. Has that theory been put in practice at all?

A. I think it is the basis for a great deal of exploration going on now.

Q. Money has been spent?

A. Money has been spent and is being spent.

Q. And new developments have been made?

A. Yes.

Q. Have you endeavored to work out any statement of the percentage of the land that in that series would be found to contain iron ore?

A. Yes, in Michigan for instance possibly one to two per cent. of the total area of the Upper Huronian series is already known to contain iron formation; the acreage of that iron formation is pretty definitely known. Exploration is restricted to this iron formation, and so the lines of exploration for many years ahead are pretty well blocked out.

Q. And that is between one and two per cent. of the whole series, is it?

A. Yes.

Q. We have been speaking of iron ore of the present standard of availability. Is there throughout this series and throughout this iron-bearing formation any iron ore of lower grades?

A. Yes, large quantities.

Q. If we were to assume that an ore containing 45 per cent. of iron were available, how much in tonnage, speaking generally, would have to be added to the present known reserve?

A. Certainly a great many hundreds of millions. Offhand I should say possibly two billions.

Q. That is in the old ranges alone and with their extensions?

A. Yes.

Q. You are not including the Mesabi in that?

A. No.

Q. Suppose, now, Dr. Leith, that ores from Lake Superior containing as low as 35 per cent. of iron became available, as they are in Alabama and England and France and Germany, have you made any estimate of the tonnage of reserves that are contained in the Lake Superior district of that kind of ore?

MR. COLTON: Just a moment before answering that question. We object to the reference to Alabama, because the conditions are not shown to be the same.

THE WITNESS: Yes, we have made estimates in connection with the report of the United States Conservation Commission.

By MR. REED:

Q. Have any such estimates been made by the Geological Survey?

MR. COLTON: We object to that on the ground that the Geological Survey's reports will be the best evidence.

MR. REED: They might not be in the reports. Will you answer the question, please?

THE WITNESS: Yes, this Conservation Commission's report in its relation to iron ore was written by the chief geologist of the United States Geological Survey.

By MR. REED:

Q. Did you participate in making that estimate?

A. Yes.

Q. About what percentage of ore running 35 per cent. and over is there in the Lake Superior district?

A. I do not recall the figure we used. It runs up into the billions of tons.

MR. COLTON: We object on the ground that the witness

shows that he is trying to remember from a record. The record is the best evidence and should be offered.

By Mr. Reed:

Q. You do not remember the tonnage they considered at that time?

A. I do not remember the exact figure.

Q. In a general way are you familiar with the ownerships throughout the iron ranges in Michigan?

A. Yes.

Q. That was part of your work in the Tax Commission, was it?

A. Yes.

Q. To know those ownerships?

A. Yes.

Q. Can you tell us about what percentage of the ores of Michigan is owned by the United States Steel Corporation?

Mr. Dickinson: What period are you speaking of?

Mr. Reed: I mean the available ores at the present time.

The Witness: On our first estimate in 1911 for the Tax Commission the proportion of ores controlled by the United States Steel Corporation to the total was approximately 30 per cent. On the valuation of 1912 that dropped slightly. I have not the exact figures for 1912 in mind.

By Mr. Reed:

Q. Can you get those?

A. Yes.

Q. You will try to get them for us for 1912?

A. Yes.

Q. Why would that drop between 1911 and 1912?

A. It is due largely to the discovery of ore by parties other than the Steel Corporation.

Q. You mean discoveries of substantial amounts have been made since 1911?

A. Discoveries of substantial amounts have been made since 1911, yes.

Mr. Colton: You will understand, Mr. Reed, the usual objection relating to conditions subsequent to 1911, without repeating it.

MR. REED: Yes, we understand that applies to all of Dr. Leith's testimony relating to events after 1911.

MR. COLTON: October 26, 1911.

By MR. REED:

Q. That 30 per cent. estimate in 1911 and the slightly lower percentage for 1912 are based on this arbitrary depth that the Tax Commission took, are they not?

A. Yes.

Q. Would the percentage be materially changed if a greater depth were taken?

A. Yes, it would be lowered.

Q. That is, the Steel Corporation's percentage would be lower?

A. Yes.

Q. Would the Steel Corporation's percentage in the whole Lake Superior District be changed either way if these ores that are known to exist and have greater deposits were included?

A. Yes.

Q. Which way would it be changed?

A. It would be lowered in general.

Q. Does the Steel Corporation own as large a percentage in the old ranges as it does in the Mesabi?

A. No; with the possible exception of the Vermillion range.

Q. Yes. Well, I am talking about the Michigan ranges now, the three large old ranges.

A. Yes.

Q. If it were possible to know the extent and to measure the tonnage in the old ranges as definitely as it can be done in the Mesabi, would the percentage of the Steel Corporation's ownership in the whole Lake Superior District be increased or diminished?

A. I think it likely that it would be diminished.

Q. Of these billions of tons of lower grade ore, does the Steel Corporation own thirty per cent. in Michigan?

A. I cannot answer that question offhand.

Q. You have not computed the percentages?

A. We have not computed any percentages on those lower grade ores.

Q. You are familiar with conditions in the old ranges in Michigan during the past twelve years?

A. Yes.

Q. Has there been much development of ore on those ranges during that period?

A. Yes; a very large development.

Q. How do the reserves now known in that district, in those three districts, compare with the reserves known in 1901, say?

A. They are, I think, fully as large as the reserves usually estimated in 1901. In certain of the ranges, the tonnage in reserve is larger now than at any time in the history of Michigan.

Q. The shipments from those Michigan ranges run about ten million tons a year, do they not?

A. About ten million tons a year, yes.

Q. Can you remember approximately what the estimated reserves were back in 1900 or 1901?

A. Approximately 150,000,000 tons.

Q. About how many tons have been shipped out of those three ranges in the thirteen years since 1900?

A. Assuming an average shipment of ten millions a year, it would give 130,000,000.

Q. That is, 130,000,000 have been shipped out of the reserves which in 1900 or 1901 were estimated at about 150,000,000?

A. Yes; about.

Q. Then, if those estimates were correct at that time, of course there is only 20,000,000 left?

A. Yes.

Q. You are familiar with the estimate made by Mr. Finlay for the Michigan Tax Commission, are you not?

A. Yes.

Q. Have you ever calculated the total of the reserves which he estimated in those ranges in 1911?

A. I think he estimated 190,000,000 tons.

Q. Then the discoveries have more than kept pace with the shipments?

A. Yes.

Q. How about the discoveries of recent years; have they kept pace with shipments?

A. Yes; they have been considerably in excess of shipments.

Q. How much in excess? Have they developed as much as twice the tonnage each year that has been shipped?

A. Yes; I should say they have in the last two years probably more than twice.

Q. Then, instead of the reserves shrinking with shipments, they seem to have increased, do they not?

A. Yes; I think there has been a steady increase in reserves in Michigan, or a general increase in reserves in Michigan in the last ten or twelve years, regardless of shipments.

Q. Who has been most active in developing these new ore bodies in the Old Ranges in Michigan?

A. Most of the iron-mining companies have had a part at one time or another in this development. I may say that this is true with the possible exception of the Steel Corporation itself, which has been less active than most of the other companies.

Q. Will you name some of the companies that have been most active in this development work, and those that have developed the largest amount of new ore?

A. The Cleveland-Cliffs Company, developing its ore principally in the Marquette district; the Pickands-Mather Company, principally in the Iron River district; the M. A. Hanna Company, in both the Crystal Falls and Marquette districts; the Corrigan-McKinney Company, the Wickwire Company, the Davidson Ore Company. That, I believe, includes the principal explorers. There are a number of others I could name with a little thought.

Q. Has the Steel Corporation been buying any of these newly developed ores in the Michigan ranges?

A. Not that I know of in recent years.

Q. Have they bought much in Michigan since 1901?

A. Not that I know of.

Q. And you would know it if they had bought any?

A. I think I would; yes.

Q. Take some of these companies. How do their holdings compare with the Steel Corporation's in Michigan? Take the Cleveland-Cliffs Company, for instance.

A. At the time of our estimate in 1911, the Cleveland-Cliffs Company controlled about twice the ore controlled by the Steel Corporation.

Q. Twice as much as the Steel Corporation?

A. Yes.

Q. Has there been much aggressive buying, much competition to secure these newly developed tonnages in Michigan?

A. There has not been keen competition for some years. There is more or less competition always in securing a desirable new property; but properties have been developed and have not been taken over for some years.

Q. Are there at the present time developed properties of that kind that are on the market and can be bought?

A. Yes.

Q. Do you happen to know whether at the present time the owners of likely-looking properties are hurrying their development—anxious to get them on the market?

A. Yes.

Q. Well, what is the situation as to that?

A. There have been several ore bodies found in recent years by exploring interests, which have not yet been leased or sold to any of the large ore groups, and which are available for such negotiation or sale now.

Q. I see. There does not seem to be any desperate demand, then, for any such ore properties?

MR. COLTON: I object to that as argumentative.

By MR. REED:

Q. Dr. Leith, you are familiar, in a general way, with the properties up in that district that could be bought by anyone who wished to start a steel company, or to get reserves for a steel company that was established now, are you not?

A. Yes.

Q. Suppose that you were commissioned to get a reserve for a steel company of the size of Cambria or Bethlehem, let us say, using about two million tons of ore a year, would you have difficulty in securing it?

A. I think not, within a reasonable time.

Q. Well, I am talking now over the whole Lake Superior district, in the different ranges there. Suppose that a steel company of that size were to commission you to secure, let us say, a fifty-year supply, at the rate of two million tons a year, how long do you think it would take you to accumulate the necessary 100,000,000 tons of ore?

MR. COLTON: I object to that as theory and not calling for facts.

MR. REED: Will you answer the question, please?

THE WITNESS: That would call for a reserve of approximately 100,000,000 tons. I think there is fully that tonnage available for negotiation to-day, and the time required to get it would simply depend on the time taken to arrive at a satisfactory agreement as to terms and to draw up the papers.

MR. DICKINSON: What area does that question embrace?

MR. REED: The Lake Superior district.

MR. DICKINSON: Oh, yes.

By MR. REED:

Q. Do you know of any ores in the Marquette range that could be taken up right at this time—any ore lands that are in the market at present?

A. I think so; yes.

Q. Do you know of any in the Menominee range?

A. Yes.

Q. Whereabouts are they?

A. In the Iron River district and in the Crystal Falls district. Those are parts of what is ordinarily referred to as the "Menominee range."

Q. What size are those properties, Dr. Leith?

A. Well, ranging up to six or eight million tons in an individual deposit.

Q. What size mine would that make, compared to the

Q. Have any companies within the last few years laid in long time reserves of ore?

A. Yes.

Q. Can you name some of the companies that have increased their reserves within recent years?

A. Yes, the Lackawanna Steel Company, Jones & Laughlin Company, the Wickwire Steel and the Inland Steel. Those are all I can recall at this moment. There are others that I could make a list of.

Q. Has there been keen competition or otherwise in the purchase of these ore lands, or have the purchases been made with discrimination and deliberation?

Mr. Colton: We object on the ground that the witness has not been qualified.

The Witness: I can speak only from the ore end of it. From my knowledge of the ore conditions and the efforts of people controlling the ore to place the ore I should say the buying has been done with judgment and discrimination and that there is no particular evidence of any extreme panic to get ore.

By Mr. Reed:

Q. Is there any limit now in sight to the development of additional ore in those ranges?

A. I do not know of any practical limit. There has been a very remarkable change in the view of that question in recent years because of the discoveries of depth and the large quantities of ore in almost all of the ranges.

Q. What is the present view on that subject?

A. It used to be assumed that the iron ores would have certain rather severe restrictions in depth, that perhaps the bulk of the ore would be found not to go over 1,000 feet from the surface. As explorations and developments have been carried on the ore has been followed down in many cases considerably below this depth, and in the two cases I mentioned before, to depths of 2,400 and 2,700 feet. Also ore has been found frequently by drilling to a depth of 2,000 feet. The ore both in quality and quantity at these greater depths seems to be identical with that above, and so now geologists,

mining engineers and mining men all hesitate to place any limit on the expectations for the ore. There is nothing to go on geologically which would place any limit to-day. The limit would be commercial, if anything.

Q. From your knowledge of the districts and of the development work that has been done and is being done, do you believe it humanly possible to monopolize the ores of those districts?

MR. COLTON: Objected to on the ground that the witness is not qualified to answer that question, it being one of fact and of law.

THE WITNESS: Practically no, because of the enormous area that would have to be controlled and the vast variety of lands and conditions which would have to be taken into account in effecting a monopoly of that sort.

By MR. REED:

Q. What would be the effect of any effort to corner the ores up there, by buying up the ore in sight?

A. It would have the effect, I presume, of stimulating exploration and the development of reserves at a little faster rate than they are being developed now.

Q. It would simply result in the development of more ore?

A. Yes, there are a considerable number of exploration companies actively engaged in this exploration, and they are prepared to proceed just as fast as the commercial pressure warrants them in proceeding.

Q. Has there been any evidence of any corner in iron ores in those districts in the period of your acquaintance with the district?

A. No, not that I know of.

Q. Now, Dr. Leith, we have been talking of the ores of the Lake Superior district. Are there any ores in Brazil that are available for shipment to the Atlantic Coast of the United States?

A. Yes.

Q. What was your first acquaintance with Brazilian ores?

A. I visited them in the summer of 1910.

Q. Have they been explored to any extent up to the present time?

A. Yes.

Q. By what companies?

A. Prior to 1910 there had been explorations by an English company called the Itabira Company, and by a French company the official name of which I do not now recall, and by the St. John del Rey Gold Company at Mora Velhi, which has large holdings in that district.

Q. In the explorations that have been made since have you taken any professional interest?

A. Yes.

Q. Have you acted in a consulting capacity or otherwise in that connection?

A. Yes, for the Brazilian Iron & Steel Company, which has been exploring them continuously since 1910.

Q. Have you familiarity with the records of those explorations?

A. Yes.

(Here a paper was marked "Defendants' Exhibit No. 99.")

By Mr. Reed:

Q. I show you Defendants' Exhibit No. 99 and ask you what that is.

A. That is a sketch map of the portion of Brazil northward from Rio showing the ore-bearing district in its relations to the Atlantic Coast and in relation to ore transportation.

Q. In Exhibit No. 99 I notice a number of railroads there enter or come close to this square which includes the iron ore districts. What are the names of those railroads?

A. The one coming in directly from Rio is called the National Central Railway of Brazil. It is a government-controlled railway that runs through the iron-bearing district, or a large part of it.

A second railway coming in from the southeast, but stopping just short of the ore-bearing district, is the Leopoldina Railway.

Q. Are there any geographical obstacles to the extension of that railway into the ore fields?

A. The conditions are not favorable for the extension of the Leopoldina Railway, although it is entirely possible.

A third railroad comes up from the east coast. This railroad has been built in about half-way to the ore-bearing district, up the valley of the Rio Doce River. In that case there are no barriers to the extension of the road to the ore-bearing field.

Q. Have the surveys been made?

A. Yes, the surveys have been made and the concessions have been granted by the government.

Q. What is the distance of that ore field from the port of Rio?

A. 300 to 375 miles.

Q. What is the distance from the port of Victoria, along this last railroad?

A. About the same.

Q. What is the quality of this Brazilian ore, Dr. Leith?

A. It is a hematite, largely hard and specular, partly soft, the larger part of it being of the Bessemer grade; that is, sufficiently low in phosphorus for Bessemer use.

Q. You have actually examined this ore on the ground, have you?

A. Yes.

Q. You have examined some of the deposits of it?

A. Practically all, yes.

Q. That was in 1910?

A. Yes.

Q. How does this ore compare in quality with the ores of Lake Superior?

A. They are higher in average quality; considerably higher.

Q. How does this ore in Brazil run in iron, the best quality of it?

A. There are considerable tonnages of ore of the best quality running 68 and 69 per cent. metallic iron, and about .020 in phosphorus, or twenty thousandths.

MR. COLTON: Did you offer that paper in evidence? I did not hear you do so.

MR. REED: No, I have not yet. I will take your suggestion and offer it now. We offer Defendants' Exhibit No. 99 in evidence.

MR. COLTON: That is objected to as irrelevant, and as not having been shown to be prepared by this witness, and therefore incompetent.

By MR. REED:

Q. Do you know Defendants' Exhibit No. 99 to be a substantially correct map, Dr. Leith?

A. I do.

Q. Did you prepare it yourself?

A. I did.

Mr. REED: I renew the offer.

MR. COLTON: I renew the objection, except as to the fact that he has not prepared it himself.

(The map referred to was thereupon marked "Defendants' Exhibit (Leith) No. 99, October 1, 1913," and will be found in the volume of exhibits.)

By MR. REED:

Q. Dr. Leith, at what point in this district are the most active explorations being made?

A. In the northeast portion of the district, about the town called Itabira de Mattro Dentro.

Q. Has the ore in that particular part of the district been explored with any thoroughness?

A. Yes; it has been examined and surveyed with the greatest care during the last three years.

Q. That is, by this Brazilian Iron and Steel Company?

A. By the Brazilian Iron & Steel Company and by the Itabira Ore Company and by independent examinations.

Q. Have you seen the results of all of those explorations?

A. Yes.

Q. You have been over those ore bodies yourself?

A. Yes.

Q. In the district which will first be reached by this railroad which is coming up the river from Victoria, how much of this 68 and 69 per cent. iron ore is there in sight?

A. May I refer to a memorandum?

Q. Well, if you prepared it yourself, yes.

A. I have prepared it myself, yes.

In sight, above the ground——

MR. COLTON: Just a moment. Are you going to offer that in evidence, Mr. Reed?

MR. LINDABURY: No. It is simply to refresh the recollection of the witness.

By MR. REED:

Q. When did you prepare this memorandum, Dr. Leith?

MR. COLTON: We object to refreshing the recollection of the witness by that memorandum without its being shown that the sources from which he prepared it are competent.

By MR. REED:

Q. When did you prepare this?

A. Yesterday and this morning.

Q. What does it represent?

A. It represents a summary from our own personal observations and the observations of our assistants, compared and checked by the estimates of three other groups of engineers.

Q. Who made the calculations, of which this appears to be a summary?

A. As far as our own company is concerned they were made by E. C. Harder, who is the manager for the company in Brazil, and checked by our own office.

Q. Are these your calculations, your totals?

A. These are my totals.

Q. Based on what?

A. Based on the figures and detailed survey submitted by——

MR. COLTON: Will you have him specify his company, please, Mr. Reed?

MR. REED: Yes; he gave the name of his company.

By Mr. Reed:

Q. Now, you started to tell us the quantity of that highest grade ore at that one point and in sight above the ground.

Mr. Colton: I object to that on the ground that it is secondary evidence.

Mr. Reed: Will you answer, please?

Mr. Colton: And further on the ground that the original records are not produced.

The Witness: In sight there are estimated in this district 250,000,000 tons of ore running above 68 per cent. in metallic iron.

By Mr. Reed:

Q. Is the nature of those ore bodies such that they may be expected to extend below the surface?

A. Yes, they are known to extend below the surface for some depth.

Q. When you say that 250,000,000 tons appear above the ground, I wish you would explain how that ore occurs. Is is in hillocks?

Mr. Dickinson: I do not think he said "above the ground," did he?

The Witness: This ore occurs in outcrops on the sides of the range—the lower foot hills, and this tonnage is the tonnage that can be calculated between the lowest observed outcrops and the highest observed outcrops. It takes no account of the extension of this ore beneath the surface.

By Mr. Reed:

Q. If account be taken of the extension of this ore beneath the surface, say to any reasonable depth, what tonnages result?

A. By going down 600 feet below the lowest outcrop, the tonnage is approximately 600,000,000 tons.

Q. You are speaking now only of this highest grade ore?

A. Yes, only of this highest grade ore.

Q. How about mining conditions there, Dr. Leith? Can this ore be taken out in open pit mining?

A. Yes; very largely.

Q. Suppose you extend that district a little bit and take the whole of the basin at the northeast corner of this district that will be served by this Victoria Railway; what tonnage above the lowest outcrop level do you get of this highest grade ore?

A. About 400,000,000 tons.

Q. And down to the level of, say, 600 feet, what tonnage do you get?

A. One billion.

Q. Is there any ore of that quality remaining in Lake Superior?

A. Practically none.

Q. Has there ever been a large quantity of such ore in the Lake Superior District?

A. No.

Q. Has there ever been any quantity like this?

A. No.

Q. (Continuing) That you have testified to?

A. No.

Q. Now, is there other ore besides this 68 and 69 per cent. quality?

A. Yes, there is a large tonnage of so-called soft ores, running 64 to 66 in iron; a little higher in phosphorus.

Q. About what tonnage of that is there in this Rio Doce basin?

A. Our estimates for the entire Rio Doce basin of ore of that grade are 365,000,000 proved, and one billion tons with moderate assumptions of depth. In this case it is an assumption of less than 600 feet. I was speaking of a depth of 600 feet in the other case. For these lower grades we have assumed a smaller depth.

Q. Now, in these figures that you have been giving us, have you been taking into account the whole of this Brazilian field?

A. No; just the Rio Doce basin, which presumably will be the first to be opened up.

Q. Have you considered also the quantity of ore that is tributary to this government railroad that you speak of?

A. Not in such detail, but we have made estimates from the data available.

Q. Is any part of the ore about which you have testified in the Rio Doce basin included in these later estimates of ore tributary to the government railroad?

A. No.

Q. About what quantity of this highest grade of ore is there that is tributary to the National Railway?

A. If I may answer that question in a little different form, I might say that we have estimated approximately two billion tons of ores of both grades tributary to this railroad, and from our detail surveys and examinations of parts of this area, wherever detailed estimates have been made, we think at least half of this will be of this highest grade.

In other words, practically one billion tons of the highest-grade ore.

Q. Are there still other grades of ore besides these two that you have mentioned in that district?

A. Yes; the ore grades right off through all stages into the surrounding rocks. The largest additional source of ore that has not been mentioned is the so-called canga or rubble ore, which is merely the broken-up ore lying at the surface. This area has not been glaciated like the Lake Superior district, with the result that all the ore that has been broken up by erosion through a long geological process remains there as a blanket of more or less consolidated material, covering many square miles of territory, this blanket ranging up to 50 feet in thickness and aggregating a very large tonnage. This ore in this blanket or canga runs somewhat lower in grade than the high-grade ores I have been referring to, averaging somewhere in the neighborhood of 54 to 64 metallic iron and phosphorus for the most part above the Bessemer limit. These ores have not been estimated in detail, and have not been included in any of the estimates heretofore quoted.

Q. You have not included those in any of the figures you have given us?

A. No.

Q. Is it possible to make any estimate of the probable ore

reserve in this whole Brazilian district of ore that will run 64 per cent. or better?

A. Well, building on to our detailed surveys, and our examinations of all of the deposits, we think that four billions of tons is a conservative figure, not including the canga.

Q. How does that compare with the Lake Superior district as a source of supply of iron ore? I mean particularly now as to the quality of the ore and its iron and its phosphorus content?

A. Well, it is higher grade ore than anything now available in Lake Superior.

Q. Are any such tonnages known in Lake Superior as those?

A. No. This tonnage that I quote is something over twice the Lake Superior tonnage. I might call attention to the fact, further, that this ore is practically at the surface or in sight, and does not include deep ores which have been developed by drilling or underground explorations, as they have in Lake Superior.

Q. In speaking of Lake Superior tonnages, you are considering ore now developed?

A. In the Lake Superior tonnages we include all ore.

Q. All ore now developed?

A. Yes, all ore now developed.

Q. How about the climate in which this Brazilian ore is located—the climate of the district in which this Brazilian ore is located?

A. Well, this particular district is regarded as the most healthful in Brazil. It is in the most densely populated province; one that has been inhabited almost continuously for nearly 400 years; the Province of Minas Geraes. The country has been almost completely deforested, and there are farms—many farms—and a considerable dairy industry through this iron district.

Q. Now, Dr. Leith, are any preparations being made for the shipment of this ore to Europe or to America?

A. Yes.

Q. To North America?

A. Yes.

Q. What are the present plans of the company which is conducting these explorations, as to making this ore available in the European and North American markets?

A. I do not feel at liberty to state the specific plans, but in general they involve the construction—the complete construction of a railroad to Victoria adequate for handling ore, the building of adequate docks and harbor facilities at Victoria, and the construction of a steamship line adequate to take care of a large tonnage of ore.

Q. Have you estimated the cost of mining that ore and of transporting it to North Atlantic ports?

A. Yes.

Q. About what would it cost to place that 68 or 69 per cent. low-phosphorus ore at Baltimore or Philadelphia or New York?

A. By allowing figures for the different stages of mining and transportation large enough to yield a fair profit, we have estimated that the ore could be put down at east coast points here or on the European coast for between eight and nine cents per unit.

Q. Is such ore marketable at Baltimore, Philadelphia or New York at that price?

A. I think so, judging from current rates.

Q. There is no ore as good as that, I suppose, on the market now?

A. Nothing as good to compare it directly with, but inferring from the competing ores now available—the highest grades—it seems to be a safe conclusion that this figure of eight to nine cents per unit is a competing rate.

Q. In figuring that cost, what have you allowed for the steamship haul from the Brazilian port to the North American port?

A. $3.

Q. $3 per ton?

A. Yes.

Q. What is the present quoted ocean rate?

A. Something less than that. I cannot give the present figure. I was looking into it not long ago and as I recall it it was $2.50 or $2.75.

Q. That is the present quotation?

A. I do not know what the present quotation is.

Q. But it was that the last time you knew it?

A. The last time I looked it was below the $3 rate.

Q. You are assuming the $3 rate for your own cost?

A. I assume the $3 rate for our own cost in order to be on the safe side and give an adequate return on the investment necessary for the construction of a complete new fleet.

Q. Based on the present consumption of iron ore along the Atlantic seaboard and in towns as far back from the seaboard as, let us say, Harrisburg, how long would this Brazilian supply of the highest grade ore last?

MR. COLTON: That is objected to on the ground that the witness has not been qualified, and that the whole subject is speculative.

THE WITNESS: An indefinite time.

By MR. REED:

Q. Well, a great many hundred years?

A. It would run up into the hundreds of years.

MR. REED: You may cross examine, Judge.

CROSS EXAMINATION

By MR. COLTON:

Q. Is Mr. Finlay a mining engineer?

A. Yes.

Q. Did he have general charge of the Minnesota tax investigation in reference to the value of the ore?

A. In Michigan?

Q. Yes.

A. Yes, for 1911.

Q. Those conventions that you assumed in estimating the Michigan ore had some common sense basis, had they not?

A. May I qualify my answer to your former question as to Mr. Finlay's having charge?

Q. Yes.

A. Mr. Finlay made an estimate and report for the Tax Commission, but when it came to actually valuing the ore for taxing purposes the matter was put entirely in my hands, and

that explains the answer that I made earlier that I had charge of that work.

Q. I understood you to say that you had certain conventions in taking levels and other things connected with that, and I am simply asking now whether they had some common sense basis.

A. Common sense from a taxation standpoint.

Q. And some reference to the value of the ore, also?

A. Yes.

Q. You were seeking to arrive at the commercial value of the ore?

A. The present commercial value, not including probable or speculative values.

Q. So that it would bear its due proportion of the tax that should come on property with reference to the other property in the State?

A. Yes, sir.

Q. And that was done under oath?

A. Yes.

Q. Your estimates of reserves in the mines of Michigan were about 124,000,000, were they not?

A. About 124,000,000. You are referring to 1911?

Q. Yes.

A. I cannot recall, but it was somewhere in that neighborhood.

Q. And the reserves in the drilled area, about 44,000,000?

A. I cannot recall the detail figures, but that is approximately correct.

Q. And the total reserve was somewhere in the neighborhood of 170,000,000?

A. Yes.

Q. Have you the figures at hand?

A. For 1911, yes; but those are the approximate figures. (Referring to report.) Yes, those figures are correct.

Q. Now, of the area that you testified had not been explored, it is the fact, is it not, that the exploration of the area in that neighborhood will be slow and expensive on account of the heavy drift?

A. Relatively so, although no marked difference from the past in that regard.

Q. Have you your own report here or summary here?

A. The tax commission work?

Q. Yes, the summary that you wrote?

A. No, that is in manuscript in the Tax Commission's office in Lansing. I have the summary I wrote for the Mineral Resource Division of the United States Geological Survey, which was printed, and it is substantially a correct summary of what was used by the Tax Commission.

Q. It was your opinion at that time, and you so reported, did you not, that the table which you made up assigns no area nor tonnage to high silica, low phosphorus ores of about 40 per cent. grade which have been mined on both the Gogebic and the Marquette ranges? These lean ores are so abundant and grade so imperceptibly into iron formation that no estimate of their tonnage or area has been attempted. In considering the table, however, they should be taken into account as adding a considerable reserve, which would tend to bring the total ascertained reserve more nearly to the present total shipment from the region.

That was about 219,000,000 tons, was it not?

A. Yes.

Q. And was that included in a statement which you made in your report?

A. Yes.

Q. In your report at that time you made this statement, did you not:

"Probably not more than ten per cent. of the area of the upper Huronian slates of the Crystal Falls, Menominee, Iron River and adjacent areas has been explored. Iron formation lenses are likely to be found almost anywhere in these slates. The heavy drift covering will make their discovery a slow and costly process."

Is that a fact?

A. Yes. That is a fact and has been the fact in the past.

Q. It was also your opinion at that time, and you so reported:

"The present estimates of probable ore are limited by

certain conventions, which are described elsewhere, which bring the total reserve to a figure below the total past shipment of iron ore from Michigan. There can be no reasonable doubt, however, that the reserve of iron ore, developed and probably available, approximates the total past shipment. This statement is true for all the ranges except the Menominee, and the shortage in the Menominee is more than offset by the great promise of the adjacent Crystal Falls and Iron River districts."

That was your opinion at that time?

A. Yes.

Q. Is that a correct statement of fact?

A. As I judge it, yes.

Q. Would you name the different properties upon which you would get that 100,000,000 tons of ore, and their location, for that steel company of which Mr. Reed was speaking?

A. I could name the larger number, I believe.

Q. Suppose you start with the Mesabi Range.

A. I should prefer to make a more accurate statement, however, than one just trusting to memory; but I could name offhand enough——

Q. Name what you had in mind when you answered the question.

A. I had in mind tonnage in the Marquette district controlled by the Breitung interests.

Q. What would be the average grade of that ore——

MR. LINDABURY: One moment. I think you interrupted the witness before he had finished his answer.

MR. COLTON: I would like to add something to my question.

MR. LINDABURY: But he had only given a part of his answer. Your question was broad, and when you stopped him, I suspected that he had not finished.

MR. COLTON: No, he had not finished.

THE WITNESS: That grade would be the average soft grade, so-called, of the Marquette district.

By MR. COLTON:

Q. What would be the analysis of that, dried at 212?

A. I presume 57 or 58 per cent. in iron; and phosphorus .1. Then I had in mind——

Q. Did you give the tonnage?

A. No. I would prefer not to make any definite statement of tonnage because in doing that I would be stating information which belongs to these companies rather more than to myself. I presume there is no objection on the part of these companies to saying what tonnage they have got. As a matter of fact, you can get that tonnage from the tax records.

Q. We want you to show on what you based your answer when you answered the question as to 100,000,000 tons.

A. If you will let me run through the list of properties, I will add on the tonnage at the end of the question.

Q. I would rather have the tonnage as you go along.

MR. LINDABURY: I think the witness ought to be allowed to answer the question in his own way. You have asked him a very broad question.

MR. COLTON: I have added that part of my question, to give the tonnage and average analysis of the ore.

MR. LINDABURY: You might make your question read any way you choose, but I think the witness should be allowed to complete his answer to it in his own way, without interruption.

MR. COLTON: If you desire, I will withdraw the question and put it in the form requesting him to give the analysis and tonnage at the same time.

MR. LINDABURY: It will make his answer more intelligible and fairer to him and to the record to let him complete it in the form in which he wishes to make his answer.

THE WITNESS: For two reasons I do not like to state the total tonnage of individual properties. In the first place, the information is not primarily my own. In the second place it is difficult in running over a long list, to make statements which are sufficiently accurate. I can present a list, or answer the question in a general way, in the manner in which I started.

By MR. COLTON:

Q. You have already answered it in a general way.

MR. SEVERANCE: As to one concern. He has only given the name of one concern.

MR. LINDABURY: He only mentioned one concern and then you interrupted him, and the reason I interposed was because it made it appear as if that was all.

MR. COLTON: I specifically stated that I added that to the question.

MR. SEVERANCE: But you said he answered the question in a general way.

MR. COLTON: I meant he answered Mr. Reed in a general way.

MR. LINDABURY: I suggest that he be permitted to make his answer in his own way.

MR. COLTON: I withdraw the question, then, and will ask it in a different form.

By MR. COLTON:

Q. I ask you to state what properties you had in mind when you stated to Mr. Reed that 100,000,000 tons could be procured, on each of the properties, their analysis as regards iron content and phosphorus, the analysis being at 212.

A. I will make such a statement, with the qualification that I am drawing on memory for a considerable mass of detail, and I should want to verify those statements by reference to the records.

Starting with the Breitung, Marquette district, we have a tonnage of soft ore which might run 57 or 58 per cent. iron, phosphorus perhaps .1; tonnage available upwards from five millions.

In the Crystal Falls district, the so-called Amasa Porter exploration in which there is available about a million tons of ore averaging 56 or 57 per cent. in iron and about two-fifths of it of Bessemer grade.

The lands of the Judson Company in the Crystal Falls district, giving an average of dry iron in the neighborhood of 57, phosphorus .2; tonnage probably eight millions and upward.

The properties on the Cuyuna Range controlled by the Northern Pacific Railroad. In this case I do not feel free to

state the exact tonnage, but I would like to put it in several tens of millions.

MR. REED: That information you got in a professional way?

THE WITNESS: Yes; and I do not feel free to state it. I know the tonnage.

MR. LINDABURY: Several tens of millions?

THE WITNESS: Yes.

MR. DICKINSON: I would like to have the witness define "several" a little more closely. It might mean three or fifty.

By MR. COLTON:

Q. If you state within ten million it will be close enough for our purposes, with reference to that particular property.

A. Professionally I would rather not do it. I do not feel that it is my information to give. I would rather have you get it from the Northern Pacific Railroad. I presume you would have no difficulty in getting it. I think it is enough if I state the places where this tonnage can be gotten.

Q. Very well. We will pass that for the present.

A. I would add on the Cuyuna range all of the remaining tonnage and more, if desired, under the control of Mr. Cuyler Adams, Mr. Crosby and others. I have stated to you the sources from which 100,000,000 tons can be secured.

Q. The total shipments from the Cuyuna range are less than a million tons?

A. Yes, so far.

Q. And the formations in the Cuyuna range are such as to make the estimate somewhat difficult in that range, are they not?

A. As compared with the Mesabi, not as compared with the Menominee.

Q. Do you know when the first shipment was made from the Cuyuna range?

A. I think last year. Whether there was a small amount the year before I have forgotten. I think last year was the first shipment.

Q. Did you state the average analysis and phosphorus

content for those properties on the Cuyuna range? I have forgotten.

A. I did not state them for the different properties, but they would average about the same as the Michigan properties I mentioned; in other words iron somewhere between 54 and 58 per cent, and relatively high phosphorus.

Q. Are these all the properties you had in mind when you answered Mr. Reed's question?

A. I did not attempt to bring any more in mind. I thought that enough to supply the 100,000,000. I think I could name more if necessary.

Q. All right. Go on and name all you can.

A. I would prefer not to name them, if you please.

Q. Does that represent, then, about the tonnage that you have in mind?

A. Of ore that would be available?

Q. The tonnage that you had in mind in answering Mr. Reed's question?

A. Yes.

Q. And the very largest portion of that tonnage was on the Cuyuna range, which was not opened up until 1911?

A. Yes.

Q. How does that ore compare in quality with ore——

MR. REED: Excuse me. You mean the Cuyuna was not opened up until 1911?

THE WITNESS: I presume he refers to shipments.

MR. REED: Shipments began then?

THE WITNESS: Shipments began.

MR. SEVERANCE: The question was "opened up."

By MR. COLTON:

Q. How does the ore, while there is some variation in the different contents and the phosphorus, compare with the ore of the following analysis at 212: Iron 61.58; phosphorus .1039?

A. It is lower grade.

Q. Very much lower, is it not?

A. That is purely a relative term. The ratio of 57 to 61 answers it.

Q. In 1902 or 1903 the average considered merchantable was about 58, was it not?

A. Lake Superior?

Q. Yes.

A. Lower than that. What year was that?

Q. 1902 or 1903.

A. I can answer that question specifically by referring to a memorandum. Offhand I should say it was lower than that at that time.

Q. You would not be ready to state how much lower, without referring to memoranda?

A. No.

Q. You spoke of the reserves in existence in 1911 and the reserves in existence in 1901. In estimating reserves in 1901, ore men had in mind a very different average analysis from that which they had in mind and now have in mind, in 1911, or at the present time? Is that a fact?

A. I should not say very different. I think in all cases they practically limited it by 49 to 50 per cent.

Q. You mean to say that in 1901 ore of 49 per cent. was considered merchantable?

A. I think in estimating tonnages, yes; I think 49 and above. That is, in estimating any tonnage ore was included which would run down to and including fifty.

Q. Is it not a fact that for many years the tonnage of the Lake Superior district was estimated at about 600 to 700 million tons of merchantable grade ore?

A. For the entire Lake Superior region?

Q. Yes.

A. I presume it is true. I do not recall specifically any estimates of that kind.

Q. You do not recall any made by yourself?

A. I may have made them, and, as I say, I presume it is true; but I do not recall that particular figure of 600,000,000 at this moment.

Q. Is it not true to the best of your knowledge?

MR. LINDABURY: If he says he has no recollection of it how can you justify that question? He says he does not recall.

By Mr. Colton:

Q. He says he presumes it is true. What do you base that presumption on?

A. For what year are you asking?

Q. Subsequent to 1901. At any time subsequent to 1901 or during 1901.

A. There was a total of 600,000,000 tons estimated for the Lake Superior region?

Q. Yes.

Mr. Reed: Is that a question or a statement, Dr. Leith?

The Witness: That is a question I am asking.

By Mr. Colton:

Q. Yes, that is my question.

A. I do not recall having made such an estimate, but the facts were such that that would be a very reasonable estimate to be made at that period. It is entirely possible that we may have made one from our office of that sort.

Q. One of the largest companies of which you spoke that had ore properties was Pickands, Mather & Company?

A. Yes.

Q. Do you know that Samuel Mather is connected with that company?

A. Yes.

Q. Do you know of Samuel Mather's connection with the Federal Steel Company?

A. No.

Q. Back in 1901?

A. No.

Q. Do you know whether he is a director in the United States Steel Corporation?

A. At present, yes.

Q. Do you know of the various purchases of property, certain purchases that he made for the National Tube Company?

A. No.

Q. If he made any purchases for the National Tube Company you did not know at that time?

A. No.

Q. Now, when you speak of increasing the levels, when you went beyond those conventions that were adopted in the Michigan Tax report, did you have any reference to increasing levels in the State of Minnesota, or increasing the depths, I should say?

A. It is not possible in Minnesota. In the Mesabi Range the bottom is known, absolutely determined. In Michigan it is not.

Q. These depths that you have assumed, and the extensions beyond these depths, are largely theoretical?

A. No, I should say to a very small degree theoretical. Knowing and studying the geological conditions in each property, knowing the average expectation for mines of a certain district or a certain part of a district, we have assumed that a minimum expectation for a given ore body would be to put down one additional level; in other words, given on the bottom level a surface of ore, it must go down some distance, the smallest convenient unit to use in estimating that distance is one level, and that is accepted by mining men as practically assured.

Q. It is a fact, however, that the higher levels as a rule are developed first, is it not?

A. Yes.

Q. That probably accounts, more than any other reason, for your having taken the higher levels as the basis for estimating tonnages in the Michigan ranges, when estimating for the Tax Commission?

A. Well, we have not taken the higher. We have taken all the levels there were.

Q. You took all the levels there were?

A. We took all the information available for estimating tonnage.

Q. What did you leave out, then?

A. We left out nothing down to a depth of 100 feet below the bottom level.

Q. And you left out everything below that?

A. For taxation purposes, yes.

Q. Why did you leave it out?

A. I think the reasonable view of the situation, on the part

both of the mining men and the Tax Commission, was that while geologically and from a history of the district there is every reason to suppose the ore was going to go considerably farther, in individual cases there were doubts and hazards, and in individual cases injustice might be done if any great extension should be put on, and that in going far beyond the 100-foot convention the State would be taking the position of taxing what mining men would regard as a reasonable hope, rather than a fact proved by explorations below the bottom level.

Q. It is a fact that during the past fifteen years the Mesabi Range has constantly increased in importance, is it not?

A. Yes.

Q. From the point of view of shipments?

A. Yes.

Q. There is no other range in the United States that compares with it from the point of view of shipments, during the last fifteen years?

A. No.

Q. Do you know any range in the world that compares with it from the point of view of shipments?

A. No.

Q. The State of Minnesota, as a producer of ore, has increased in importance steadily during the last fifteen years, has it not?

A. Yes.

Q. And there was no shrinkage in the last year in its relative proportion of production, was there?

A. I believe not.

Q. Now, all these foreign ores, wherever located, have contributed but a very small proportion of the ore consumed in the United States, have they not?

A. Yes.

Q. The Brazilian ores, so far as they are concerned, there have been no shipments of them to the United States?

A. None.

Q. It was for a long time assumed that the Mesabi ores were of a high grade and were limited in quantity; is not that true? Very limited in quantity?

A. Yes.

Q. And of the Lake Superior district as a whole, that the really high grade ores were limited in quantity?

A. Yes.

Q. Now, a concern getting the control of the high grade ores, what effect would that have on the other companies as to the use of ore?

A. Well, I do not know what effect it would have. I presume the company with the higher grade ore would have any advantage in cost that the grade would afford.

Q. And it is a fact that you know from observation that the high grades of ores are used first?

A. Not in all cases; in general, yes.

Q. In general?

A. Yes.

Q. That is particularly true of the Lake Superior region, is it not?

A. It was more true in the past than it is now.

Q. The higher grade ores are becoming exhausted there, are they not?

A. Well, I cannot help answering yes to that question, because that refers to all grades.

MR. REED: What do you mean by "the higher grades of ores"?

MR. COLTON: I assume that the witness understands the meaning of the "higher grades."

MR. REED: I would like to understand it, too. If Mr. Colton will not tell me what is meant by "higher grade ores," perhaps you will, Dr. Leith.

MR. COLTON: I will withdraw that question and ask another one.

MR. LINDABURY: There is no question pending. The last question has been answered.

MR. COLTON: I will withdraw the question.

MR. REED: And you withdraw the answer, too?

MR. COLTON: He says he does not understand it.

MR. REED: No; I said I didn't understand it.

MR. LINDABURY: You cannot withdraw a question that has been answered.

MR. REED: What do you mean by "higher grade ores," Dr. Leith?

THE WITNESS: I presume he means the higher grades that the Lake Superiors ship; that would be ores running well above 60 or 61 and with low phosphorus.

By MR. COLTON:

Q. Do you know how many million tons of developed ore there were in 1911 on the Mesabi Range, having an iron content as high as 61.58, and phosphorus as low as .039, prior to October 26, 1911?

A. I do not know.

Q. Do you know whether the total quantity of Bessemer ore on the Mesabi Range in 1911 was in excess of 358,000,000 tons?

A. Of the higher-grade ore?

Q. Averaging, say, as high as 61.58, and .039 phosphorus.

A. I cannot answer that question; I would have to draw too heavily on my memory.

Q. Well, of Bessemer grade, then?

A. I cannot answer that definitely; I presume that amount of ore was there of that grade.

Q. You spoke of the rate of royalty being about 55 cents now.

MR. REED: No, he did not.

Q. (Continuing) And mostly about 35 cents.

A. I was referring particularly to Michigan.

Q. Well, did you not refer to the entire range?

A. Not in that connection.

Q. Well, then, that is not true of the rest of the region, is it?

A. Substantially so. On the Cuyuna range there are certain royalties that have gone above 55, but the bulk of the ore which has been leased and which is still available is within the limits I have given you.

Q. Within what time were those leases made? What period does that cover?

A. Well, since leases have begun to be taken on the range; within the last three or four years, perhaps.

Q. In 1907 was that about the usual rate of royalties in the Mesabi range?

A. I am not referring to the Mesabi range at all.

Q. Oh, you are leaving the Mesabi range out of consideration?

A. Yes. I am referring to the areas in which this hundred million tons could be gotten for this hypothetical company coming into the district.

Q. In 1911, outside of the Mesabi range, was that the average rate, or approximately?

A. I did not mean to say that was the average rate for all mines or all ores. I said that was the average rate for which these ores could be gotten and for which a new company could hope to get ores at the present time, coming into that district.

Q. Well, would the general average be higher or lower than that?

A. The general average, including all mines, would be lower than that.

Q. The general average——

A. (Interposing) Not including the Mesabi.

Q. Not including the Mesabi, the general average would be lower than that which you have stated for those particular mines?

A. Yes.

Q. Do you mean lower than 35?

A. Lower than 35, probably.

Q. For the same grade ore?

A. For the same grade ore.

Q. Where would you get that?

A. I do not know that you can get it, but you are asking me about the average royalties being paid in that district.

Q. The average royalties are on leases taken some time prior thereto?

A. Yes. If you go back you will find leases running as low as ten cents, twelve cents, fifteen cents or twenty cents. Some of the largest deposits in those districts have been leased at the lower figures.

Q. Are the rates higher or lower for leases on the Mesabi range?

A. In general, higher.

Q. And that is due to the greater availability and commercial value of that ore, is it not?

A. Yes.

Q. Is it very much higher?

A. Yes.

Q. In 1911, say, was it very much higher then?

A. Yes.

Q. In 1907?

A. Yes, it was higher then.

Q. About how much higher in 1911 was the rate of royalty on the Mesabi range than it was in the rest of the Lake Superior district, for properties that could be secured by lease, if you know?

A. I cannot answer that in any terms of averages, because I have not made up any averages. Individual royalties in the Mesabi range went well toward a dollar, or above, I think, in 1911, whereas in the other ranges, as far as I know, individual royalties seldom got above or did not get above sixty cents. I do not recall any instance now where there was anything that went above sixty cents in individual cases in the other ranges.

(Whereupon a recess was taken until two o'clock P. M.)

AFTER RECESS.

C. K. LEITH,

the witness under examination at the taking of recess, resumed the stand.

CROSS EXAMINATION (Continued).

By Mr. Colton:

Q. Mr. Leith, you spoke of a report of a conservation commission this morning. You were not speaking technically of any report of a conservation commission, were you?

A. I cannot recall just the organization of that. There was a report gotten out——

Q. (Interposing) Was it a speech or a report?

A. It was a compilation made up at the instance of the general conservation commission, a report which drew very largely on governmental sources for its information, published either as a bulletin of the Geological Survey, or as a report of this commission.

Q. Do you know whether it was in the form of a speech?

A. Oh, no. A series of papers and estimates of tonnages.

Q. Do you know anything personally or have you any personal knowledge as to the sources from which those estimates were made?

A. Yes, sir.

Q. Do you know whether there are any estimates or records on file upon which that was based, in the Geological Survey, or ever have been?

A. I think there are. The iron ore report was drawn up by the chief geologist, after consultation with a number of people, including myself, and I know certain facts and figures were submitted to him.

Q. Did you ever see any of those records?

A. Not since they left my hands.

Q. Were those records ever in the files of the Geological Survey?

A. I cannot say as to that.

Q. You did not prepare the estimate yourself, or any of the estimates?

A. Yes. In response to a request by Dr. Hayes, who was in charge of that work, I prepared certain estimates for the Lake Superior country, and also I wrote a large part of the section on the Lake Superior country. That was submitted to Dr. Hayes, and then later there were conferences. Dr. Hayes went west, and I went personally with Dr. Hayes into the Lake Superior country, where we conferred with Mr. T. F. Cole, of the Steel Corporation, and others, with regard to the estimates.

Q. Whatever estimates were made or whatever conferences were had were prior to the report of the Michigan Tax Commission, were they not?

A. Yes.

Q. And they were made prior to the revised reports of the Minnesota Tax Commission, were they not?

A. I do not recall that. I think some of the first reports of the Minnesota Tax Commission were out about that time; possibly before; I do not recall.

Q. What work did you yourself do on that report?

A. My work was largely compilation. I had been following for some years the development of the different ranges, and knew more or less about the tonnages from personal observation, and also the tonnages assumed by the different companies, or estimated by the different companies, and I simply put together all information I had available before me.

Q. What ranges did you cover in your part of the work?

A. All of them. Lake Superior as a whole.

Q. You did not have the tonnages for all the different companies at that time, did you?

A. Oh, no. This entire estimate was not done with anything like the accuracy of the work done for the tax commission. As a matter of fact, the information was not available. It was the best general size-up of the situation we could make with the information available, not only to us but to some of the leading companies.

Q. And that was not done, you say, with the accuracy with which the Minnesota Tax Commission report was made?

A. No.

Q. Or of the Michigan Tax Commission report?

A. No.

Q. I think you spoke of there being upwards of five million tons of ore on the Marquette Range—I have forgotten the name of the company.

A. The Breitung Company.

Q. The average analysis of that ore was about 58 per cent.?

A. I think I qualified that; that was more or less of a guess.

Q. Well, in the neighborhood of that?

A. In the neighborhood of that.

Q. It might be 57?

A. It might be 57 and it might be 59.

Q. And its phosphorus was what?

A. It was non-Bessemer. I put the figure down as .1 so as to indicate that it was something well above the Bessemer limit.

Q. Is that up to the average grade of ore on the old ranges?

A. The average soft ore of that range.

Q. Not up to the average of the hard ores?

A. No.

Q. You spoke of a million tons in a property in the Crystal Falls district, averaging 56 or 57.

A. Yes.

Q. What kind of ore was that? Soft or hard?

A. It is pretty hard to say how that would class; it has been developed only by drilling. Part of it would rank with soft ore and part with hard; I should say the bulk of that would class as soft ore. Most of the ores of that district are soft ores.

Q. When was that developed?

A. Three years ago.

Q. And if it is soft ore, it is about up to the average?

A. Approximately for that district, yes.

Q. You spoke of the Judson property having about eight million tons averaging iron content about 57 and phosphorus .2, as I understand it?

A. Yes.

Q. That is rather high for phosphorus?

A. Not for that district.

Q. But high for the Lake Superior district, is it not?

A. Well, no, not for non-Bessemer ores. That is not a bad figure for Lake Superior non-Bessemer ores.

Q. When was that developed?

A. The first ore discovered there was about three years ago, and the development has been proceeding continuously since.

Q. Now, in 1911, according to the best estimate you could make, there were about forty million tons on the Cuyuna Range shown up?

A. I believe that was the estimate we used in our Monograph 52.

Q. That was your opinion at that time?

A. At that time it was, yes.

Q. Do you know about what that averaged in iron content?

A. In the neighborhood of 55 dried and about 50 natural.

Q. That is quite a little below the average grade of Mesabi, is it not?

A. Yes.

Q. Do you know what transportation connections there were to that forty million tons of ore in 1911?

A. Yes, there was one railroad there, the Northern Pacific. The Northern Pacific parallels the field and runs through it from end to end.

Q. Did it have connections with the mines at that time?

A. No, the distances were short to the mines, a matter of two, three or four miles.

Q. Is ore on the Mesabi Range averaging 59.17 and phosphorus .063 good grade ore?

A. Yes.

Q. Above the average grade on the Mesabi, is it not?

A. I should judge so.

Q. I am giving analysis 212 degrees Fahrenheit.

A. Yes.

Q. How would you class ore running 58.98 iron and .063 phosphorus from the point of view of being good grade ore on the Mesabi Range?

A. Well, it is fairly good grade of ore; it would be in any range.

Q. It is rather above the average, is it not?

A. I do not know whether it would run much above the average; probably slightly above the average. I do not recall at this moment what the average Mesabi is, although we have calculated that with a great deal of detail.

Q. And, of course, the higher grades are, just in that proportion, of better grade than we have spoken of?

A. Yes.

Q. Such as iron content 61.58 and phosphorus .039; that would be very much better?

A. It would be a higher grade; yes.

Q. To-day in your testimony you referred to the four billions of tons of ore in Brazil as being something more than twice the Lake Superior tonnage. Did you in making that statement have in mind any limiting analyses for the Lake Superior ores; that is, for iron content and phosphorus?

A. Yes, practically the ore accepted by the Tax Commissions is the commercial grade of ore running down to and including 50 per cent. in iron.

Q. 50 per cent. natural or 50 per cent. dried?

A. We have ordinarily taken that 50 per cent. dry in making the estimates on some ranges; the average being in the neighborhood of 50 per cent. or above natural.

Q. When you stated there was something over twice as much, those four billion tons amounted to something more than twice as much, did you take into consideration at all transportation conditions in the Lake Superior district, or just assume that the transportation conditions up there were such as to make that ore available that came up to that analysis?

A. We were not discussing transportation conditions; we were discussing simply tonnage, and my statement had to do with relative tonnages.

Q. It had nothing to do with transportation?

A. No.

Q. It had nothing to do with ease of mining?

A. No.

Q. The pre-eminence of the Lake Superior district in 1911 was due to the richness of its ores, was it not?

A. Yes.

Q. The ease of mining on the Mesabi Range is chiefly accountable for its pre-eminence as a producer?

A. Together with its grade, yes.

Q. Together with its higher grade?

A. Yes.

Q. In figuring on the cost of sending ore to New York, how much did you allow, if anything, for an export tax by the Brazilian government?

A. The figure allowed for that is 25 cents a ton.

Q. And, of course, the tax could be so increased as to make

that wholly, from a commercial point of view, worthless to this country?

A. Yes, but a still further allowance would be made of 25 cents covering possible factors left out; leaving out those factors, the cost comes lower than the cost I stated to you.

Q. But the export tax, of course, could be placed at such a figure as to make it commercially non-available for the United States?

A. Yes, the Brazilian government could kill the goose that laid the golden egg if it wanted to.

Q. If they wanted to develop their own iron industry, as they are considering doing—is not the Brazilian government considering developing its own iron industry?

A. On a small scale, yes.

REDIRECT EXAMINATION

By Mr. Reed:

Q. Is there any coal available for domestic iron industry in Brazil?

A. No.

Q. For the manufacture of coke, I mean?

A. No.

Q. Is there any good coking coal anywhere in South America, that you know of?

A. Not that I know of; certainly not within reach of Brazil.

Q. They have had small furnaces in Brazil for a good many hundred years, have they not?

A. Yes; charcoal furnaces.

Q. Running on charcoal?

A. Yes.

Q. This morning, in speaking of the reasons for the tax commission's decision not to assess ore further than 100 feet below the lowest opened level, you used the expression that it was not fair to tax them on what was a reasonable hope, as distinguished from developed ore. Do you mean to say that in the Gogebic and the Marquette and the Menominee ranges it is only a reasonable hope that the ore will go be-

yond 100 feet, or what do you mean by that use of those words?

MR. COLTON: I object to the whole question as argumentative and leading, giving the witness an idea of the answer he is expected to make.

By MR. REED:

Q. Will you answer the question?

A. My statement was made primarily as the argument that both the mining men and the tax commission men had brought up why it should not be extended any further. It was recognized, I think, by all, that the extension below 100 feet is a practical certainty, based on scientific data, so far as any range is concerned, or any large part of the range, but in taxing any individual mine there is always a local chance for some accident in the way of a fault or break coming in which would make the extension of that particular property unfortunate.

Q. Taking the whole district as a district in the Gogebic, Menominee and the Marquette range, what is the fact as to the probability of the ore going down further than 100 feet below the lowest opened workings?

A. Considering the ranges as a whole, or even large parts of ranges, I should say it was a scientific certainty.

Q. You told us that in 1911 the depth to which the tax commission went was 100 feet below the lowest opened level in each mine?

A. Yes.

Q. Was the same depth used in 1912 in the same mines?

A. The same relative depth was used; that is to say the extension of 100 feet below the bottom levels; but, in a considerable number of mines during that interval, the lower level had been opened up, with the result that the bottom taken for the new estimate was 100 feet lower than it was the year before.

Q. Is that same thing true of this year, 1913?

A. For a number of the mines, yes.

Q. Has that been true in the past?

A. Yes.

Q. You contrasted this morning the difference between the estimates of reserve tonnage back in 1901 with the estimate of reserve tonnage to-day in these old ranges in Michigan, and you mentioned the shipments from those ranges during the intervening period. Of course it is evident that ore that was not included in the estimates of 1900 must be under consideration to-day in view of the fact that all of the ore that was then estimated, practically, has been shipped in the interval. Is this ore that is under consideration to-day, and is estimated as forming the reserves, ore of low grade that was known and disregarded in 1901, or is it ore of the same grade that was then considered?

A. It is ore of the same grade as was then considered, and does not include any ore that was disregarded at that time, practically.

Q. I want to call your attention particularly to the Gogebic range by itself: How do the known reserves in the Gogebic to-day contrast with those of twelve or thirteen years ago?

A. They are considerably higher.

Q. What have been the shipments from the Gogebic during the past twelve or thirteen years? About how much?

A. Roughly I should say the Gogebic has been shipping three million to three and a half million a year, which would put their shipments during that period at 35,000,000 tons, perhaps.

Q. Dr. Leith, have there been any big finds in the Gogebic to account for this increase in the reserve?

A. Yes; several of them.

Q. Do you know the Newport Mining Company?

A. Yes.

Q. If they have made any find, I wish you would tell us what they have done?

A. In explanation of my remark I may say that the ore in the Gogebic rests in a basin formed by the intersection of a footwall of quartzite and certain so-called dikes. In the old days they mined down to the dike and assumed that the ore stopped there. They would follow the intersection down the pitch as far as the ore body went, and, for the most part did not explore beneath the dike, assuming that the dike

would cut off the ore permanently, as it does cut it off, as a matter of fact, locally.

As the development went on, the occasional daring operator projected the shaft or drill down through the dike, and down a considerable depth, and got additional ore on a dike coming in beneath with the same attitude as the upper dikes; and the Newport mine was one of the pioneers in this regard. Its ore in the upper levels, mainly, above the thousand foot level, had been practically played out, and the mine management, facing the possibility of abandoning the mine, decided to take a chance with a deep shaft, and go down through with the idea of picking up certain dikes that might come in, at considerable depth, from adjacent properties. They put down a large, well-equipped shaft, through some six or eight hundred feet of barren grounds, and did catch such a lower dike, with an ore body on it much larger than anything they had had before in that district, or in that mine.

Q. Can you give us any idea of the size?

A. An ore body which may probably turn out to be the largest in that Gogebic district.

The Tax Commission estimate there, which is limited closely by this 100-foot convention, is ten millions of tons; practically all on the lower dike. Practically that same performance has been duplicated with other properties in a similar way, with the result now that neither the mining men nor geologists are prepared to say how far it might be feasible to put down a shaft with the idea of catching more of those dikes. There are certainly dikes down many thousands of feet, and there is nothing showing yet in any of the bottom levels to indicate that these dikes fail to carry ore as far down as they might extend.

Q. Who owns that Newport Mining Company?

A. The Schlessinger interests, of Milwaukee.

Q. That is not a Steel Corporation property?

A. No.

Q. Is that good ore?

A. Yes, that is one of the best ores in Lake Superior.

Q. Can it be commercially mined?

A. Yes.

Q. In the Gogebic and other ranges where this 100-foot convention was used, have the mine operators built their superstructures and put in their equipment as if that 100-foot limit marked the bottom of the ore?

A. No; in many cases not.

Q. What have they done?

A. Well, in a considerable number of cases there have been expenditures for shafts and buildings and general plant far in excess of anything that has been warranted by the tonnage of ore if limited strictly by the 100-foot convention, indicating the belief that the 100-foot convention was a mere convention.

Q. Do you know anything about the ores south of Wakefield, on the Gogebic Range?

A. Yes.

Q. Have there been any discoveries there recently?

A. Yes.

Q. What companies have been exploring in that part of the Gogebic?

A. The M. A. Hanna Company, Coates & Tweed, of Duluth, and Pickands, Mather & Company.

Q. Have those companies developed much ore?

A. Yes.

Q. Have they prosecuted the development vigorously?

A. Yes.

Q. Were they included in your hundred million estimate?

A. No; neither they nor the Newport were included.

Q. What are the names of some of these other large developments that have gone to great depths? You said in addition to the Newport there were some others of importance.

A. The Palms Mine.

Q. Who owns that?

A. That is controlled by the Schlessinger interests, and the Anvil, adjoining, which is also controlled by the same interests.

Q. Did you include any one of those three in this available ore?

A. No.

Q. Of the hundred million class?

A. No.

Q. Did I interrupt you? Were you about to give another one?

A. No. I was going on to say that these developments in the Anvil and Palms have been of the very first magnitude, indicating ore bodies as large, if not larger, than anything known in the past in the Gogebic Range at high levels.

Q. How about the quality of the ore?

A. It is of the best quality for the Gogebic Range.

Q. Can you give us a little better idea of the size of this—any idea of the tonnage that is probable in those new developments at the Palms and the Anvil?

A. I have not checked over the tonnage estimate within a year, and the development has been proceeding rapidly, but I do know that they have followed the ore body along the foot wall for a distance upward of 2,000 feet, and they are still in an ore breasting 100 feet wide. In addition to that, they have crosscut away from the foot wall up toward the hanging wall to test the territory out there, which is ordinarily non-iron-bearing in that district, and they have been lucky enough to pick up another large ore body there.

Q. You have not any idea of the tonnage that has been shown up?

A. Well, it runs up—at the time I looked at it it was at least two or three millions, and I expect it has considerably increased over that.

Q. Do these companies that you have named—this Newport Mining Company or the Schlessinger interests that control the Palms and the Anvil, sell their ore in the open market?

A. I think so, largely.

Q. You have not included any of the Schlessinger interests in this list of properties that might be purchased to make up that hypothetical hundred million, have you?

A. No.

Q. Have you included any of the Longyear-Bennett interests?

A. No, I have not.

Q. Where are they; in what ranges?

A. Principally on the Mesabi Range. They have considerable holdings on the Mesabi Range of high grade ore.

Q. Any on any other range?

A. Yes, they have a high grade mine of extremely low phosphorus ore in the Marquette Range.

Q. Any in the Cuyuna?

A. In the Cuyuna, yes, they have. That was not mentioned.

Q. Any on the Gogebic?

A. None on the Gogebic.

Q. Or the Menominee?

A. They have interests on the Menominee, but those were included in certain of the mines I mentioned this morning.

Q. Do the Longyear-Bennett interests operate furnaces?

A. No.

Q. Do they hold the ore for investment and resale?

A. The ore is for sale, as far as I understand it.

Q. Could you get a hundred milion tons out of the Longyear-Bennett holdings, do you think, alone?

A. I have not seen their later estimates; that is, I have not followed them closely, but my impression is that they alone could supply an additional hundred millions of high grade ore.

Q. Down in the Gogebic Range did you ever hear of Coates & Tweed?

A. Yes.

Q. What is their business?

A. They have a part of the great ore body that has been discovered by the M. A. Hanna Company on the south part of the range—the extension of it. They are independent operators in Duluth. As a matter of fact, they are simply drill operators; men who take up lands and explore them, with the idea of turning them over to the companies that use the ore.

Q. What kind of ore have they found down there at Wakefield?

A. High grade Gogebic ore, near the surface. All of these discoveries of Coates & Tweed, M. A. Hanna and Pickands & Mather have been found near the surface. They will be

opened up partly by open pit, which will be an entirely new development in that district, and the profits from the ore, which are already the highest in the Gogebic of all the Michigan districts, are regarded locally as likely to be exceeded by these new developments.

Q. How do the Gogebic ores of this class range in the market compared in price with the ores of other ranges?

A. Well, there would be the difference between the old ranges and the Mesabi Range—a difference of 40 to 75 cents, depending on the Bessemer and non-Bessemer grades. These Gogebic ores are partly Bessemer and partly non-Bessemer, but they have a very considerable shipment of Bessemer ore.

Q. That is, they run higher in price than the Mesabi ores?

A. Oh, yes, even more than Mesabi Bessemer.

Q. Why is that?

A. It is largely a matter of texture.

Q. Is their texture better than the Mesabi ores?

A. Yes.

Q. Did you include any of these Coates & Tweed properties in the hundred million tons that you spoke of this morning?

A. No; I stopped when I reached 100,000,000 tons. As I said, I might continue.

Q. I notice Mr. Colton led you into saying——

Mr. Colton: Do not say I led him into saying.

Mr. Reed: I think you did, perfectly properly.

By Mr. Reed:

Q. (Continuing) I noticed this morning that with entire propriety Mr. Colton led you into saying that the Mesabi range was in point of shipments the biggest range in the world. Was that altogether correct?

A. I do not know——

Mr. Colton: (Interposing) During the last fifteen years; I think you ought to call his attention to that.

The Witness: I tried to recall, when the question was asked, what the shipment was from the Luxembourg, and the German-French field, on the boundary between France and

Germany, and I could not recall whether it was less or more, and I said the Mesabi was larger. I do not know now whether that is as much or a little less, but I do know that it is of the same general order of magnitude so far as tonnage is concerned.

By Mr. Reed:

Q. You are not sure as to the exact shipments?

A. I do not recall them.

Q. I notice, when asked about your estimate of 40,000,000 tons on the Cuyuna in 1911, you said that was your estimate at that time?

A. Yes.

Q. You do not mean to say that is the estimate of the amount shown there to-day?

A. No, not at all.

Q. That was an estimate simply of what had been developed up to that time?

A. Yes.

Mr. Reed: That is all. Any questions?

Mr. Colton: Yes, I have some questions.

RECROSS EXAMINATION

By Mr. Colton:

Q. Would ore averaging 58.37 of iron and .064 of phosphorus be good grade ore for the Mesabi range?

A. Well, it ranks fairly well up; it is not the best.

Q. It is above the average?

A. I cannot answer about the average; perhaps the average is not far from that figure, but I cannot say what the average is. It is in the book that is in front of you, Monograph 52.

Q. In 1911, according to your best judgment, estimating the available ore to be given for the Mesabi district, that was about 1,600,000,000 tons. Is that correct?

A. I believe so.

Q. And would the average be somewhere in the neighborhood of the figure named by me, the average of iron content, somewhere near that figure I gave you for that tonnage?

A. I think the average would be somewhat below for that tonnage.

Q. Somewhat below for that tonnage?

A. Yes, below the figures named.

Q. So that a company owning that character of ore, 1,220,000,000 tons, would own over three-fourths of the Mesabi range, of the ore then estimated to be on the range, would it not?

A. Yes, on the basis of those estimates.

Q. Do you know whether that Longyear-Bennett property is entirely distinct from the Hill lease property?

A. Yes, it was property included under the Hill lease, but when the Hill lease was surrendered those properties were taken up independently, and are now being managed by Longyear and Bennett.

Q. You are talking about property that was formerly included in the Hill lease?

A. Formerly, yes.

Mr. Reed: That applies only to the Mesabi?

The Witness: It applies only to the Mesabi.

By Mr. Colton:

Q. The Longyear-Bennett Company——

A. (Interposing) So far as the Longyear-Bennett properties are outside of the Mesabi, the statement does not hold.

Q. How much of that tonnage of the Longyear-Bennett property was in the Mesabi?

A. The larger part of it.

Q. In 1911 your best estimate of the Vermillion district, of the available ore, was 30,000,000 tons, according to your best judgment?

A. I think that was the figure used.

Q. And for the Marquette it was about 100,000,000 tons?

A. That is the figure stated in the monograph.

Q. Is that about right for 1911, according to your best judgment?

A. About how many tons?

Q. 100,000,000?

A. In the light of our more recent work, that was too large at that time.

Q. And the Gogebic about 60,000,000 about that time, in 1911?

A. Yes, that again has been cut down somewhat by the tax commission work.

MR. LINDABURY: That he has said a good many times.

By MR. COLTON:

Q. And the Cuyuna at that time was about 40,000,000 tons?

A. Yes.

Q. The Menominee and Crystal Falls, about 75,000,000 tons?

A. Yes.

Q. Now, as to any given part of the ore country up there, you cannot tell as to whether the ore goes down or not?

MR. SEVERANCE: Is that a question or a statement?

MR. LINDABURY: It was not his statement.

THE WITNESS: Yes, we can.

By MR. COLTON:

Q. You cannot tell, though, with sufficient accuracy to make it justifiable for taxing purposes, or assume it does extend down below that level that you have already assumed it extended down to?

A. It is agreed that there is practically no question about it as applied to a district or part of a district; as to the question of applying it to an individual mine, the Tax Commission hesitated to go beyond 100 feet for fear of the possibility of doing injustice.

Q. Then some of them run out?

A. Yes; that happens to any mine. There is always a remote possibility of any mine running out, but it is the geologist's business and the mining engineer's business to tell of a mine whether it is approaching exhaustion or not.

Q. There is a difference there between commercial value and an estimate of tonnage from a geological point of view?

A. Not particularly.

Q. There is a difference, is there not?

A. There is for taxing purposes; I do not know about these things in the open market.

By Mr. Reed:

Q. Dr. Leith, do you know of any Longyear-Bennett lands at Embarrass Lake?

A. On the Mesabi Range?

Q. Yes.

A. Yes.

Q. Do you know whether those were included in the Hill lease?

A. They were not; those ores were found after the Hill lease had been made; I had forgotten that.

Q. What is the tonnage there?

A. I do not know, but it runs up into large figures, up in the tens of millions.

Q. Do you know of any Pillsbury lands on the Mesabi?

A. Yes, some of them are included in the so-called Longyear-Bennett lands.

GEORGE H. CROSBY

was called as a witness on behalf of the Defendants, and being first duly sworn, testified as follows:

DIRECT EXAMINATION

By Mr. Reed:

Q. You live in Duluth, do you, Mr. Crosby?

A. Yes, sir.

Q. What is your occupation?

A. I am an explorer of iron lands.

Q. How long have you been in that business?

A. Exclusively in that business for the past ten years.

Q. When did you first embark in that business?

A. About 25 years ago.

Q. In what district?

A. On the Mesabi Range.

Q. And in what districts have you developed iron lands since that time?

A. On the Mesabi and the Cuyuna.

Q. Have you any properties in the West?

A. Yes, sir.

Q. Where are they?

A. In Washington and Utah.

Q. Are those iron mines?

A. Yes, sir.

Q. Developed iron properties?

A. Partially explored.

Q. You are finding iron on them?

A. Yes, sir.

Q. How long have you known the Cuyuna Range?

A. About nine years.

Q. When was it first known that there was iron ore there? That is, when was the range first announced?

A. I think about nine years ago.

Q. When did you begin to be interested in it?

A. About eight years ago; between eight and nine years ago.

Q. Has your interest been continuous since that time?

A. Yes, sir.

Q. Have you more than one property?

A. Yes, sir.

Q. About how many?

A. I do not know; a great many.

Q. You have not computed the total acreage, have you?

A. No, sir.

Q. Lying in different parts of the Cuyuna Range?

A. Yes, sir.

Q. Are you interested in both the North and the South Ranges there?

A. Yes, sir.

Q. Has any other operator been as active as yourself in the development of the Cuyuna properties?

A. I think not.

Q. Are your properties for sale to anyone who is willing to pay a fair price for them?

A. We have always leased our properties.

Q. That is what I mean; they are for sale on lease?

A. Yes.

Q. You do not hold them with the expectation of operating furnaces yourself?

A. No, sir.

Q. I wish you would describe the Cuyuna Range, by telling us generally its length, extent, shape and location.

A. The developed or partially developed portion of the Cuyuna Range starts in at the northeast at a point known as Sandy Lake.

Q. In what county?

A. In Aitken County; and it extends in a southwesterly direction to a point called Randall, a distance of approximately 30 miles.

Q. In what counties does it lie?

A. It runs through Aitken, Crow Wing and Morrison Counties.

Q. All in Minnesota?

A. All in Minnesota; yes, sir.

Q. Is there another part of the range?

A. Then there is a part that is called the North Range, and the eastern explored boundaries of that are at Rabbit Lake on the northeast, to a point called Riverton on the southwest, a distance of about 12 miles.

Q. In what counties?

A. That is all in Crow Wing County.

Q. Are there any developments or promised developments north of that North Range?

A. Yes, sir; the formation of the Cuyuna Range is known to extend from Mille Lacs on the south to Emily Lake on the north, a distance of about 35 miles; 30 to 35 miles.

Q. That is, the iron-bearing formation is known to extend so far as that?

A. Yes, sir.

Mr. Dickinson: Emily Lake; is that up by Man Trap?

The Witness: I am not familiar with Man Trap, but it is south of Grand Rapids, Minnesota.

By Mr. Reed:

Q. Mr. Crosby, has there been any drilling in the Cuyuna Range?

A. Has there been any drilling?

Q. Yes.

A. Yes, sir; there has been a very large extent of drilling there.

Q. What kind of drills do they use there?

A. They use churn drills and diamond drills.

Q. Can you give us an approximate estimate of the number of drill holes that have been put in in the Cuyuna Range?

A. Yes, sir.

Q. About how many?

A. Upwards of 3,500; between 3,500 and 4,000 holes, I should think would be approximately correct.

Q. All in this district that you have described?

A. All in the immediate district that I have described; yes, sir.

Q. Have you familiarized yourself from time to time with the showings of those drill records?

A. Yes, sir.

Q. Are you familiar with the ore deposits on lands of others that have been developed there?

A. Yes, sir.

Q. Are you familiar with the mines that are now operated on the Cuyuna Range?

A. Yes, sir.

Q. What mines are there there that are now shipping ore?

A. The Kennedy, the Armour No. 1 and No. 2, the Thompson, Pennington and the Barrows. That is to say, they have been shipping this year, Mr. Reed.

Q. That is what I mean; mines that have shipped in 1913.

A. Yes, sir.

MR. COLTON: The same objection to all testimony subsequent to October 26, 1911, in the case of this witness, Mr. Reed.

MR. REED: Yes, surely; that is understood.

By MR. REED:

Q. Do you know a mine named Meacham?

A. Yes, sir.

Q. Do you know a mine named the Rowe?

A. Yes; they are just getting that property ready to mine. They have not mined any ore from it.

Q. They have not started shipping?

A. No, and the same applies to the Meacham.

Q. And the Ironton?

A. There is one at Ironton that is called the Cuyuna-Duluth Mine, the Ironton mine. Yes, they are shipping. They have shipped from that this year.

Q. And one operated by the Cuyuna Mille Lacs?

A. Yes. That is about three miles north of Crosby; and they have shipped somewhere in the neighborhood of 35,000 tons this year from that mine. They are just opening that mine up and they have not got it in full operation.

Q. You mentioned the Barrows Mine?

A. Yes.

Q. And the Adams?

A. That is in a state of development at this time. It is not shipping any ore.

Q. How about the Iron Mountain?

A. The Iron Mountain has not shipped any ore.

Q. It is getting ready to ship?

A. They are getting ready to ship ore.

Q. And the Duluth-Brainerd?

A. That is in the same state; getting ready to ship.

Q. And the Brainerd-Cuyuna?

A. The same.

Q. You know all those mines, do you?

A. Yes.

Q. You have been in them, or at them?

A. I have been in a number of them; yes, sir.

Q. And you have seen the drill records on which those mines are going ahead?

A. Yes, sir.

Q. Has all of the Cuyuna territory been explored, Mr. Crosby?

A. No, sir.

Q. What percentage of it is unexplored by drilling?

A. A very large percentage of it.

Q. How many tons of presently available iron ore do you estimate that there is in reserve in the Cuyuna district?

A. Close to 435,000,000 or 440,000,000 tons.

Q. How do you separate that by districts? There is a district that is named for you—the Crosby district—is there not?

A. Yes, sir.

Q. About what tonnage do you estimate that district to contain?

A. About 175,000,000.

Q. There is one called the Kennedy district?

A. About 50,000,000 in that district.

Q. And the Riverton district?

A. 50,000,000.

Q. Those are all on the North Range, are they not?

A. Yes, sir.

Q. How about the South Range?

A. About 125,000,000 tons on the South Range.

Q. Then, in addition to this there are manganiferous ores there?

A. Yes.

Q. Are they now being shipped?

A. The Cuyuna Mille Lacs is manganiferous ore, and shipping.

Q. How many tons of that manganiferous ore do you estimate there to-day?

A. About 25,000,000 tons or more.

Q. If I have followed your figures, that is a total of 425,000,000?

A. Approximately; or 435,000,000.

MR. SEVERANCE: 435,000,000.

MR. REED: Yes; but the items total up 425,000,000, if I have made the addition correctly.

By MR. REED:

Q. Have you yourself made a part of the explorations that have been made there in the Cuyuna district on which you base these estimates?

A. Yes.

Q. Has anybody done as much exploratory work as yourself there?

A. I think not.

Q. Any single interest?

A. No; they have not.

Q. You are still exploring, are you?

A. Yes.

Q. You have not reached the end of your properties there?

A. No; we have about sixteen drills on the Cuyuna at this time.

Q. Sixteen drills now working?

A. Yes, sir. They may not all be working just at this time, but we have sixteen drills that are supposed to be at work, and have been for a number of years.

Q. You told me, in answer to a question a little while ago, that a very large proportion of the iron-bearing district was unexplored?

A. Yes, sir.

Q. Is it possible to make that any more definite?

A. Yes; I should think that not more than 25 per cent. of the iron-bearing district of the range has been explored.

Q. I neglected to ask you what the shipments of the range had been. What was the first year in which the range shipped ore?

A. 1911.

Q. How much was shipped then?

A. About 140,000 tons.

Q. In 1912 about how much was shipped?

A. About 350,000 tons, approximately.

Q. And by the close of this season how much will have been shipped?

MR. COLTON: That is objected to as speculative.

By MR. REED:

Q. Please answer, Mr. Crosby.

A. About 800,000 tons.

Q. How do you arrive at that total for this year?

A. There have been over 700,000 shipped at this time and the mines are producing and shipping a certain amount of

ore each day that will bring it up approximately to 800,000 tons.

Q. And about when will the shipments close?

A. Well, about the latter part of this month.

Q. In 1911, when shipments started, what railroad facilities were there in the Cuyuna Range?

A. The Northern Pacific Road was there before the Cuyuna Range was discovered. The Soo Road came in and built a spur into the first shipping mine. That was the Kennedy Mine.

Q. What is the full name of that road?

A. The Minneapolis, St. Paul & Sault Ste. Marie.

Q. Do those two railroads reach the whole district?

A. No, sir. The Soo Railway takes in the North District, and the Northern Pacific takes in the South District and also part of the North District.

Q. Do either of the Steel Corporation's railroads penetrate the Cuyuna District?

A. No, sir; they do not.

Q. Do you know whether the Steel Corporation has any ore in the Cuyuna District, or owns any property there?

A. I do not think that they have.

Q. Can you tell us some of the furnace companies and steel companies that do own property there?

A. Yes, sir.

Q. Just give us the names of some of them, if you will.

A. The Rogers-Brown Ore Company, the Iroquois Iron Company, the Inland Steel Company, M. A. Hanna & Company, the Republic Iron & Steel Company and the Pittsburgh Steel Company.

Q. Does the Brier Hill Company own any?

A. And the Brier Hill Steel Company of Youngstown, Ohio, and Todd, Stambaugh & Company of Cleveland.

Q. Does the Shenango Furnace Company own any?

A. And the Shenango Furnace Company. And there is one other large interest which I am not at liberty to name at this time, just recently negotiated for a large property on the range.

Q. That has nothing to do with the Steel Corporation?

A. No, sir.

Q. These companies all own or lease ore properties there, do they?

A. Yes.

Q. Some of them have bought from you?

A. Some of them have leased from me.

Q. Now, will you tell us the names of some of the individuals that own ore on the north and south ranges in the Cuyuna district, Mr. Crosby, as distinguished from furnace companies that you have named?

A. Mr. Cuyler Adams—you mean the farmers and all the different owners?

Q. No, I mean principally men in the development business, like yourself, who bought the lands because they were supposed to be ore lands?

A. Nelson & Carlson, and Longyear-Bennett.

Q. Chisholm?

A. A. M. Chisholm, John G. Williams, Albert Gross, and the C. M. Hill Lumber Company estate are large holders; Beriah Magoffin, Jr., and myself and others.

Q. Mr. Crosby, summing it up, what percentage of the merchantable ore in the north and south ranges in the Cuyuna is not owned by or leased to operating furnace companies?

A. I should say fifty per cent, at least.

Q. Will you state whether or not that ore is in the market?

A. Yes, sir.

Q. And it can be leased by any person desiring it?

A. Yes, sir.

Q. I assume, at a reasonable price?

A. We think it is reasonable.

Q. You are not giving it away, are you?

A. I have not, so far.

Mr. Reed: That is all. You may cross examine.

CROSS EXAMINATION.

By Mr. Colton:

Q. You are interested in the purchase of properties on the Cuyuna range, and their re-sale?

A. I beg your pardon.

MR. COLTON: Read the question.

(The question was read by the reporter.)

THE WITNESS: Yes, sir.

By MR. COLTON:

Q. And the relative value of the Cuyuna range ore as compared with other ore, as to how that is classified from the point of view of value, affects the value of your ore lands, does it not?

A. Yes, sir.

Q. Do you know the analyses of the ore on the properties other than your own property?

A. Yes, sir.

Q. Do you know how the ore has averaged—the average of the ore shipped from the Cuyuna range, from the point of view of metallic iron content and phosphorus?

A. Yes, sir.

Q. Dry?

A. Yes, sir.

Q. What has it been for that which has been shipped?

A. Well, it has averaged differently from different mines.

Q. Well, suppose you give the different mines and the average for each of them, so far as you know.

A. I think the Kennedy mine perhaps is the lowest grade of ore that is shipped from the Cuyuna range, and it runs around anywhere from 53 to 54 dry.

Q. Will you name the others?

A. Armour No. 2, I believe ships around 56 or 57; Armour No. 1 is about the same; a little lower, perhaps. The Pennington, as far as they have shipped this year, has averaged 58½, and the phosphorous contents of all those mines are approximately the same, with the exception of the Kennedy. The Kennedy runs around two-tenths.

Q. And what does the other run?

A. About .150; one and one-half tenths.

Q. Are you operating on the Cuyuna range individually?

A. Yes, sir; to a large extent.

Q. Whom have you associated with you?

A. I have not anyone, to speak of, in most of my properties. I operate individually—carry on my own work, under my own name.

Q. What shipments have you made from your properties, if any?

A. You mean from my Cuyuna range properties?

Q. Yes.

A. The Kennedy mine is my property; the Pennington, the Thompson. They have all been shipping ore.

Q. Do you own all of those individually?

A. I own the Kennedy mine. Mr. William Harrison, of Duluth, owns an interest in that with me. The Thompson mine, I have a silent partner in that, who owns a small interest, and the same thing applies to the Pennington.

Q. Did you know about four, five or six years ago, of large options being taken by interests connected with the United States Steel Corporation on the Cuyuna range?

A. Yes, sir.

Q. When were those options taken and what did they embrace?

A. They were taken about five or six years ago. The options embraced the lands known as the Erich lands, and I believe that there was also included in that option the property which is now the Kennedy mine; that is Mr. Harrison's property and my own; and a piece of property known as the Brown Forty, and also another piece known as the Ore Land Company, owned by Mr. Cuyler Adams and his associates.

Q. Were you interested in any of those lands at the time those options were taken, or were you interested in the taking of the options in any way?

A. I owned the fee to the Erich land with others; a piece of land known as "Nineteen Acres"; I owned the fee of that. I owned an interest in the Brown Forty, and I owned—yes, the Erich land fee.

Q. In whose name were those options taken?

A. In whose name?

Q. Yes.

A. It was in my name.

Q. No. In whose name were the options taken?

A. By the corporation?

Q. Yes.

A. Well, now, I cannot be positive as to that, whether it was taken in the corporation's name, but I think not. I think a subsidiary company of the corporation.

Q. What was the name of it?

A. I am not in position to tell you, because I have forgotten. However, I could look it up and let you know.

Q. What is the average analysis of the ore shipped from your mines—I believe you named the Kennedy, and I do not recall the other?

A. The Pennington, 58½ this year.

Q. How much ore did you estimate as being in the Pennington mine?

A. We have estimated, but I do not feel at liberty to state here how much ore there is in that mine.

Q. Approximately.

MR. LINDABURY: That is what the witness does not want to do, for private reasons, I presume.

MR. REED: Is it for some private reason, Mr. Crosby?

THE WITNESS: Yes.

By MR. COLTON:

Q. And as to all of this 435,000,000 tons, if we should want to go into the same questions with regard to all of that would you consider that confidential too?

A. My business is the drilling business, and I drill for other people as well as myself, and if I were to give this private information out to the world I would not be able to do any business on the range. I would have to quit.

Q. So you feel from a professional point of view that you are not at liberty to give us an itemized list of the tonnages here?

A. No, sir; I could not.

Q. Did you make up an itemized list of each of those properties?

A. Did I?

Q. Have you ever?

A. I have gone over them, yes.

Q. Have you made up such a list?

A. I have in my own mind.

Q. You have in your own mind, but you did not put it on paper?

A. I estimated some of the properties where we have done the drilling and others where we have not.

Q. In giving that 435,000,000, how did you get that?

A. That was arrived at by the actual ore proven up by drill, and others estimated from the records of the properties which were drilled adjoining them, and between properties that had been drilled.

Q. But did you have a list before you when you reached that sum of 435,000,000?

A. I know every property on the range as well as I see this table here.

Q. How did you estimate in these drills that the ore lies?

A. Vertical.

Q. It lies vertical, and you estimated a certain amount of ore around each drill.

A. We drill these holes a certain number of feet apart, depending entirely on conditions as we find them. We generally make a cross section starting at the north side of the formation and running south, and after we have made one cross section we can determine very readily about what we want to do on the balance of the land. We drill these holes near enough together so that we can get a pretty accurate knowledge of the material between the holes and between the sections. We make cross sections every three hundred feet apart with the strike of the ore, and then we drill holes sometimes twenty-five feet apart, sometimes 50 feet apart and sometimes 100 feet apart, depending upon the character of the vein that we are drilling on. Some of those veins are wide and some are narrow. If we find a narrow vein we have to put our holes much closer together to determine the cubic contents of the body of ore.

Q. And what are the limiting analyses of these different drills?

A. We do not count anything as merchantable ore if it is below 49 per cent. metallic iron.

Q. What is the highest grade of ore?

A. It runs as high as sixty-five to 68 per cent.

Q. At the present time no one could say as to what the average would be, because there has been, from a commercial point of view, such small development of the range.

A. We can give you an approximate idea of the average on those mines that are shipping and those that are proven up and getting ready to ship; we can tell approximately.

Q. Those that are actually shipping at the present time, without disclosing individually what each one of those mines contains, how much is there in all of these mines that are shipping at the present time?

A. Close to 100,000,000 tons of ore.

Q. And as to the rest, the statement I just made——

A. (Interposing) I mean of those that are shipping.

Q. Yes, I see. From those you think you can make an estimate as to the general average analysis of the shipments of ores of those mines?

A. Yes.

Q. And what would you give us for those mines?

A. Around 56 or 57.

Q. Just a little bit below the Mesabi, is it not?

A. Yes.

Q. The railroad rates to the Cuyuna range in 1911 were what?

A. 65 cents.

Q. In the latter part of 1911 it was 65?

A. 60.

Q. They were reduced to the Cuyuna?

A. Reduced, yes.

Q. Of those various mines, how many of them were connected prior to October 26, 1911, with shipping facilities, railroad shipping facilities?

A. Prior to 1911?

Q. Prior to October 26, 1911?

A. I think only one.

Q. What mine was shipping on October 26, 1911?

A. The Kennedy mine.

Q. Were there any other mines producing up to October 26, 1911?

A. No, sir, that is on the Cuyuna range.

Q. Would you state approximately the tonnage in the Kennedy mine, or the percentage that it has of that 100,000,000?

A. I think I will have to decline answering that question, for the same reason.

Q. What are the railroads that connect with that range? You have answered that, but I have not the names in mind.

A. The Minneapolis, St. Paul and Sault Ste Marie, and the Northern Pacific.

Q. The Sault Ste Marie, when was that extended into the Cuyuna?

A. In 1911.

Q. And the other roads, while passing by the region generally, do not have any connections into the region at all?

A. No, sir.

Q. Have they actually constructed connections there now?

A. Yes, they have with the Cuyuna Mille Lacs and Barrows, and they are extending their road to the Adams on the south range.

MR. COLTON: That is all.

C. D. TRIPP

was called as a witness on behalf of the Defendants, and being first duly sworn, testified as follows:

DIRECT EXAMINATION.

By MR. REED:

Q. Where do you live?

A. Chicago.

Q. What is your occupation?

A. Mining engineering.

Q. You are an officer of the Rogers-Brown Ore Company?

A. President.

Q. Is that the correct name, Rogers-Brown Ore Company?

A. That is it.

Q. And you have some office in the Iroquois Iron Company, have you not?

A. In a consulting capacity.

Q. What is your title there?

A. I have no title.

Q. You are consulting engineer, a sort of consulting engineer?

A. That is it.

Q. Are you also a metallurgist?

A. Yes.

Q. You have metallurgical experience, too?

A. I have.

Q. How long have you known the Cuyuna range, if you have known it at all?

A. My first visit there was in 1907.

Q. Have you been there frequently since that time?

A. Very often.

Q. In what connection, for what purpose?

A. Watching the operation of the properties that I have under my control, and doing a general business in the Cuyuna.

Q. You have charge of some operating properties there?

A. I have.

Q. What are they called?

A. The Kennedy mine, and the two Armour mines.

Q. Which range are they on, north or south?

A. North.

Q. How long have you had charge of those mines?

A. I developed them.

Q. You developed the mines?

A. Yes.

Q. Which was the first one to ship?

A. The Kennedy.

Q. Was that the first mine on the Cuyuna to ship ore?

A. It was.

Q. It shipped then in 1911, did it?

A. In 1911.

Q. And in 1912?

A. Yes.

Q. Has it been shipping this year?

A. It has.

Q. What were the total shipments from the range in 1911?

A. 147,000 tons, I believe.

Q. What were they in 1912?

A. Something over 300,000.

Q. What have they been up to the present time this season?

A. About three-quarters of a million, I think.

Q. And what will they be in all probability by the end of the shipping season of 1913?

A. It would be a reasonable assumption that they would be something over 800,000 tons.

Q. That is at the rate they are shipping daily now?

A. Yes.

Q. Are you familiar with the properties of other ore companies and of individuals on the Cuyuna?

A. In many instances.

Q. Both the North and South Ranges?

A. Yes.

Q. Have you seen drill records from time to time as put down on other peoples' property?

A. I have.

Q. You heard Mr. Crosby's description of the outline of the range, did you, Mr. Tripp?

A. I did, yes.

Q. As I remember his testimony, he described the South Range as being about 35 miles long, and the North Range perhaps 12 miles, and the width of the ore-bearing formation from north to south as about 30 miles?

A. I did not take it quite that way. The length of the range is something more than 30 miles. I bound it by the same points that Mr. Crosby did, but he has under-estimated the distance. I think he gave it as thirty miles. It is nearly double that.

Q. You think the mileage is larger?

A. Yes.

Q. Between those points that he mentioned?

A. It runs from northeast of Aitken to the town of Randall, which I believe are over 50 miles apart. The other dimensions I agree with entirely.

Q. The other dimensions you agree with?

A. Yes.

Q. Now, taking that whole district, understanding that by the term "Cuyuna Range"—understand I do not want to limit it to either the North or South Range, but in the Cuyuna District proper, what do you estimate to be the tonnage of presently available ore? Before answering that question, tell me first have you made an estimate of the tonnage of presently available or presently merchantable ore of the Cuyuna District?

A. I have made a number, based on different assumptions.

Q. Yes. Will you give us now your estimate of the presently merchantable tonnage of the Cuyuna District?

MR. REED: Do you want to enter an objection, Mr. Colton?

MR. COLTON: Yes. I object to any testimony based on estimates not made by himself, on records not produced, and referring to records not produced here.

By MR. REED:

Q. Will you answer the question, Mr. Tripp?

A. I would say that there was something over a hundred million tons of ore that is known and available to-day.

Q. Well, now, how much do you estimate for the tonnage of merchantable ore in reserve?

A. It would very likely run five times that, undefined.

Q. In this district that we have spoken of?

A. Yes.

Q. What percentage of those ores are held by individuals and not by furnace companies or steel companies?

A. I should say that 50 per cent. had already gotten into the hands of users, of the hundred million.

Q. What percentage of the five hundred million?

A. Probably not twenty.

Q. Probably not twenty per cent.?

A. No.

Q. Is the Steel Corporation interested there?

A. I do not think they are.

Q. Now, as to the quality of these Cuyuna ores, you tell us you are a metallurgical engineer, too?

A. I am.

Q. How do they compare in desirability for furnace use with the ores of the Mesabi Range?

A. They are considered more desirable than the Mesabi Range, and about equivalent to the Michigan ranges.

MR. REED: You may cross examine.

CROSS EXAMINATION.

By MR. COLTON:

Q. You spoke of there being a hundred million tons of available ore in that district. I understood that to include the entire Cuyuna District.

A. It does.

Q. What do you mean by "available"?

A. That which would be considered by the Tax Commission subject to a tax as merchantable ore.

Q. Now, of that hundred million, how much of that ore have you made estimates on yourself?

A. Practically all of it.

Q. Did you make it on all of it?

A. I have made it on that much.

Q. Well, what did you do?

A. How is that?

Q. How did you do it?

A. By calculating the cubic capacity of the ore bodies as shown up by drill work.

Q. Whose drill work?

A. By our own and other operators that do drill work.

Q. How much of it was your own drill work?

A. Not over ten per cent., I do not expect.

Q. Ninety per cent., then, was based on drill work done by other operators?

A. Yes.

Q. You only know what the operators say about it, or what the drill records show?

A. That is all.

Q. And you have not those records under control and you cannot produce them?

A. Yes—and can produce them, did you say?

Q. Can you produce them?

A. I could.

Q. Well, will you?

A. No; it would be unprofessional to do so.

Q. Then, you cannot. You could not professionally produce those records?

A. No.

Q. How did you take those drill estimates or analyses that came from other operators? What did you do with them yourself?

A. I assumed them as a fact, as is customary on all the ranges, assuming that the operation was honest and reasonably correct, and from that calculated the tonnage by the usual methods.

MR. COLTON: I except to his answer as to everything with the exception of his own ten per cent., on the ground that it is hearsay, and that the records are not produced, and that it is secondary evidence.

By MR. COLTON:

Q. As to this 400,000,000 remaining tonnage that you call "reserve" what do you mean by "reserve"?

A. Those are tonnages that are indicated by too small a number of drill holes to actually estimate the tonnage.

Q. It is speculative, then, is it?

A. It is.

MR. COLTON: That is all.

RE-DIRECT EXAMINATION.

By MR. REED:

Q. Do you mean it is speculative in the sense that its existence is unknown?

A. Its commercial existence is not assured. For instance, two holes possibly a quarter of a mile apart would indicate a body of ore between them, but unless it was drilled at closer intervals, you could not assume that there was an existing tonnage between.

Q. From your knowledge of the strike of the lens of ore in the different districts there, would you say it was a scientific probability that the ore continued?

MR. COLTON: We object to the question as purely speculative and as arguing with his own witness.

THE WITNESS: Shall I answer that?

MR. REED: Yes, please.

THE WITNESS: It has come true in more cases in that district than in any other range, that you can follow the strike of the ore bodies continuously.

As an illustration of that, the north range shows merchantable ore, I think, without a break, of 100 feet for four or five miles, actually demonstrated.

Q. You take that quality into account, do you, in making this estimate of 500,000,000 tons?

A. Yes, I do.

Q. Does that represent your best judgment of the quantity which will be shown up when these iron-bearing formations are all drilled?

A. I would expect at least that.

MR. REED: That is all.

RECROSS EXAMINATION.

By MR. COLTON:

Q. There have been some three or four thousand holes on the Cuyuna range?

A. Yes.

Q. And those drill holes began back when the Steel Corporation was in there looking over the various properties?

A. They began before that. I think the first hole was put down in the middle nineties, and I believe the Steel Corporation took their first property, or I might say the only prop-

erty that I know of on the showing of the first dozen drill holes.

Q. Did they put down any drill holes themselves?

A. They contracted some.

Q. They had it done?

A. Yes, sir.

Q. And some of those drill holes show ore and some of them do not show ore?

A. If I recollect correctly, not any of theirs showed ore.

Q. And, as a general proposition, in the Cuyuna range, of all those many drill holes that have been put down, some have shown and some have not shown ore?

A. Yes, sir.

Q. That is a fact?

A. Yes.

MR. COLTON: That is all.

MR. LINDABURY: That is so everywhere, is it not?

THE WITNESS: That is always so.

MR. REED: That is all.

(Whereupon an adjournment was taken until to-morrow, Thursday, October 2, 1913, at 10:30 o'clock a. m.)

EIGHTY-SEVENTH DAY.

EMPIRE BUILDING,
71 BROADWAY, NEW YORK CITY,

THURSDAY, OCTOBER 2, 1913.

Before Special Examiner HENRY P. BROWN.

Present on behalf of the United States, MR. DICKINSON and MR. COLTON.

Present on behalf of the Defendants, MR. LINDABURY, MR. SEVERANCE, MR. BOLLING and MR. REED; also, on behalf of the Great Northern Iron Ore Interests, MR. CHESTER W. CUTHELL.

CARL ZAPFFE

was called as a witness on behalf of the Defendants, and being first duly sworn, testified as follows:

DIRECT EXAMINATION

By MR. REED:

Q. Where do you live, Mr. Zapffe?

A. I reside in Brainerd, Minnesota.

Q. What is your occupation?

A. Geologist.

Q. Have you had experience in mining operations?

A. Yes, sir.

Q. Are you familiar with the Cuyuna Range?

A. Yes, sir.

Q. How long have you been familiar with it?

A. Since February, 1906.

Q. Where has the greater part of your work been conducted since February, 1906?

A. Almost entirely in the Cuyuna District.

Q. For what company or operators have you been working?

A. My work in that district has been done for the North Western Improvement Company of St. Paul.

Q. How long have they been operating in that district; since what time?

A. They began about 1905.

Q. They are still working there?

A. They are still working there; yes, sir.

Q. They own a number of different properties?

A. Yes, sir.

Q. Have they been exploring them?

A. Yes, sir.

Q. Have those explorations ceased, or are they still being conducted?

A. They are still being conducted.

Q. Who has had charge of the drill work and exploratory work of that company?

A. The first work that company did in that district was under the direction of C. K. Leith of Madison, Wisconsin. I was acting as his field assistant at the time. Since 1908 the work has been under my direction. That is, after the first three years.

Q. That is, since 1908 the explorations have been managed by yourself?

A. Yes, sir.

Q. Are you acquainted with the properties held by other operators like Mr. Crosby?

A. Yes; I believe I am familiar with practically every bit of work that has been done there since I was in the district.

Q. Have you seen drill records of their operations?

A. Yes, sir.

Q. How many drillings have been put in in the Cuyuna Range since 1905?

A. The Cuyuna district is a very large district. As Mr. Crosby outlined to you yesterday it extends from the northeast end in Aitkin County through Crow Wing County, westwardly, through Morrison County and over into Todd County to the west, giving a distance over all of about 60 miles; but the commercially important part of the district amounts to

only about thirty miles of this length, and is entirely located in Crow Wing County. The width is very difficult to give in definite boundaries, but, as was suggested, we might say that the area in which the district lies and in which exploratory work has been done on the basis of geological conditions which govern the Cuyuna range, extends from the south, at Lake Mille Lacs northwardly to Emily, which, again, would be a distance of about forty miles. Of course, generally, when we speak of the Cuyuna district we refer particularly to that portion which is embraced by those thirty miles in Crow Wing County; but in the entire locality the number of drill holes would be somewhere in the neighborhood of four thousand drill holes.

Q. There are a number of operating mines there, are there not?

A. Yes.

Q. Are there any mines which are developed and where work has progressed to the point that those mines will shortly be shipping?

A. Yes, sir. We have properties from which ore is being shipped to-day, and we have properties there on which shaft sinking operations are in progress, so that there will undoubtedly be ore shipped from those properties shortly.

Q. What were the shipments from the Cuyuna range in 1911?

A. That is the first year ore shipments were sent forward from the Cuyuna range, and they amounted to a few odd tons over 147,000 tons.

MR. COLTON: Mr. Reed, is not that absolutely a matter of record, that it is not necessary to prove by each different witness that comes here? It is published in the production of iron ore by the various reports and I think the figures are the same as the proof already made by the other witnesses. I do not think there is any dispute about it.

MR. REED: Substantially Mr. Zapffe's statement is the same as your proof for 1911, but you have not proved the shipments for 1912 or 1913, and I wanted to have the three years in juxtaposition.

By Mr. Reed:

Q. What were the shipments in 1912 from the Cuyuna range?

A. About 350,000 tons.

Q. What have been the shipments up to the present time in this year?

A. A little bit over 700,000.

Q. At the present rate of production what will the shipments probably be for the entire year of 1913?

A. At the rate the mines are hoisting the ore and shipping, it will probably be about 825,000 tons.

Q. Is it possible for you to estimate, from your knowledge of the mines which are being put in shape to ship, what the approximate shipments will be for the next season, 1914?

A. Yes, it is possible.

Mr. Colton: I object to that because it does not take in all the factors in the situation, and the witness has not been shown to be qualified to make any such estimate.

By Mr. Reed:

Q. Will you give us your estimate, please, of the probable shipments for 1914?

Mr. Colton: Just a moment. I object to any estimates made upon data not produced, and upon facts not disclosed, and as a mere conclusion.

The Witness: If the ore market does not fall down, if operations continue as they have for this present year, I feel quite sure that the capacity of the mines will enable the shipment of about two million tons.

By Mr. Reed:

Q. Have you made any estimates of the quantity of presently merchantable ore that is contained in the Cuyuna mines which are now producing and shipping ore, and in the mines in which mining operations have progressed to a point at which shipments are assured for next season?

A. Yes, I have estimated it.

Q. How many tons of such ore do you estimate that there is contained in such mines?

MR. COLTON: Just a moment. I object to any estimate being given by this witness that is based on data not produced or data not prepared by himself, as hearsay and secondary.

THE WITNESS: There are fifteen operations in the district in which ore is either being shipped to-day or will be shipped in the immediate future, in the year 1914, and the totals which I have calculated for each one of those properties gives me a total of some 92,000,000 tons of merchantable ore.

By MR. REED:

Q. How many 40-acre tracts are there included in those mines?

A. I have figured up the number of 40-acre tracts included in those mines, and I have obtained the number of 33.

Q. 33 40-acre tracts?

A. Yes.

Q. And on those 33 40-acre tracts how many exploratory drill holes have been put in?

A. I have counted the number of drill holes put down on those properties, and they number 374.

Q. You are familiar with those yourself?

A. Yes.

Q. And you are familiar with the location and boundaries of each mine?

A. Yes, I am familiar with all of them.

Q. How far below the point at which these drill holes are still in ore do you calculate in making these estimates?

A. I did not exceed a depth or distance of 20 feet below the lowest point at which ore is shown in these holes.

Q. How does the ore on the Cuyuna lie, in flat beds like the Mesabi, or in lenses like the old ranges, such as the Gogebic?

A. Well, it is more similar to the ore bodies in the older ranges; and, in contrast with the deposits on the Mesabi Range, it would be equivalent to the Mesabi deposits turned up on edge.

Q. What is the nature of those ore bodies on the Cuyuna as to continuity?

A. They have considerable length; their length is very much greater than their width; they are lens-shaped, and are narrow and long, and the ore deposit usually runs across three or even four forties, so that the length of the deposit will be measured in just about a mile, inside of that, and practically parallel to it, and overlapping, and to some extent, without the intrusion of dikes, we find another deposit of the same character.

Q. Are these deposits very much faulted by contrast, we will say, with the Gogebic?

A. As far as present interpretation can be made of the situation we know very little about what faulting has done. There have been very small faults, but they have never dislocated, to the knowledge of anyone that I have spoken with in regard to this matter, they have never dislocated any ore bodies sufficiently to make any difference in regard to finding out in regard to any underground operations.

Q. That is in contrast to the Gogebic?

A. That is in decided contrast to the Gogebic, where there are displacements of ore bodies by faulting or by dikes.

Q. In which range does that displacement of ore bodies occur more frequently?

A. The most faulting occurs in the Marquette district, and the feature in reference to the dikes is perhaps more characteristic of the Penokee-Gogebic range.

Q. Do you have such conditions in the same degree in the Cuyuna?

A. I explained in regard to faulting. Now, in regard to dikes, I know we have a large amount of igneous rock in the Cuyuna, in the form of sheets or bosses, and to some extent dikes, but neither have the underground operations nor the drillings been carried on to such an extent, to our knowledge, that the ore deposit can be said to have anywhere suffered by the intrusion of dikes, but the ore bodies lie very close to igneous rock, however.

Q. Does the estimate of twenty feet below the point at which your drills are still in ore allow for a possible intrusion of dikes?

A. Oh, yes, I think that is a very low figure to use. It is an arbitrary figure, but I think it is a low figure.

Q. How far, in the old ranges, if you know, is it customary to figure the continuance of the ore below the lowest working?

A. The natural method of calculating there is by allowing about 100 feet below the lowest level in the mine.

Q. In contrast with that method, is this that you have adopted conservative or liberal?

A. Well, the conclusion would be that it would be conservative.

Q. You would take just one-fifth of the assumed depth?

A. Yes.

Q. I wish you would tell us how you locate your drill-holes in order to determine the length of these lenses of ore.

A. After determining the favorable places on a forty or an eighty-acre tract for exploratory work, you start in by putting down one hole in what you think perhaps would be the most favorable place. Then the location of the second or third hole would depend entirely upon the results of the first hole. Let us say the first hole went into ore. Then your following holes would be located at distances from 50 to 75 or 100 feet from this hole in a direction, however, which would be at right angles to the supposed strike of the ore body. In this manner you perhaps put in three or four holes, forming one cross-section, and we will say your ore body is defined in that one cross-section. Then the location for the next hole would be, ordinarily, not to exceed 300 feet either one way or the other along from the first section, on the strike of the ore body. The 300 feet distance was originally taken in an arbitrary manner. Then, if we find ore in the two cross-sections 300 feet apart, it would be safe to assume that the ore was continuous between those cross-sections, and mining operations up to the present time in each instance have fully borne out the justification of this assumption.

Q. Is that method still followed?

A. Yes.

Q. And still considered reliable?

A. Yes.

Q. Has development and drill work been done on other properties than those mines you have mentioned and included in this total of 92,000,000?

A. Yes; drilling has been done on a good many properties, all the way through.

Q. Outside of the thirty-three 40-acre tracts that are included in these producing mines, how many 40-acre tracts have been shown to be ore-bearing?

A. The number of 40-acre tracts that have been shown to be ore-bearing, confining ourselves entirely to the area in Crow Wing County, along the most favorably developed area of the district, as I recall it now the calculation I made of that was something like 435—I guess it was that.

Q. Have you seen the drill records of those "outside" forties, if I may call them that?

A. Well, I have seen the results of a good deal of that drilling. I have not seen the results of all the drilling on the outlying areas, but I have seen a good deal of that.

Q. Have Mr. Crosby and other operators furnished you copies of their various drill records?

A. Yes; we make it a practice to exchange our information, in order to help each other out in the district, especially between the larger operators, and, of course, we help out the smaller fellows too, because their information is every bit as valuable, especially when taken in connection with the others.

Q. How many drill holes have been put down on these ore-bearing forties, outside of the producing mines that you mentioned?

A. Why, I did figure that up at one time. I do not recall just exactly what the figure is. It is somewhere in the neighborhood of 3,500 holes.

Q. Are you able to make an estimate of the quantity of merchantable ore on those properties, outside of the producing mines?

A. Oh, yes.

Q. Have you done so?

A. Yes. Yes, I do that continually.

Q. Now, Mr. Zapffe, outside of those mines that you have mentioned as open and being opened, what tonnage of mer-

chantable ore do you, from your knowledge of the explorations, estimate there is in those properties on the Cuyuna that are now known to contain ore?

Mr. Colton: I object to any estimate in so far as based upon data not produced and upon explorations not made by the witness himself, and upon copies of data furnished to him and not produced, as secondary and hearsay.

By Mr. Reed:

Q. Now, will you answer, please?

A. That question you asked there, that was for the tonnage outside——

Q. Outside of the mines that have been mentioned.

A. Well, the additional tonnage, to answer your question, would be 305,000,000.

Q. Does that include the manganiferous ores?

A. No, that is exclusive of the manganiferous ores; only such manganiferous ores as are now being mined were included. Of those ores which are manganiferous and are of similar character to those now being mined, we have at least 20,000,000 tons or over that, and I might add there is also a large quantity of material which, from general appearance, could be considerably benefited by very simple concentrating processes and thereby add very materially to the tonnage.

Q. Well, have you included any concentrated ore in this estimate?

A. No, there is no estimate of that.

Q. Now, are you familiar with these outside properties that you have mentioned in making this estimate?

A. Yes, excepting that I did not have the say-so as to where the drill hole should be placed in every instance and where it should be stopped, I am just as familiar with those explorations as the properties on which I directed the explorations myself.

Q. The only difference being that in one case you directed them and in the other case the owners directed them?

A. In the other cases somebody else directed it, and somebody else paid for it.

Q. You are familiar with the formations throughout the district as they have been developed?

A. Yes, sir.

Q. Coming back for a moment to this manganiferous ore, is that ore merchantable?

A. Well, they are selling it on the market to-day, and have been since the fall of 1912.

Q. Where have they been shipping that manganiferous ore?

A. The first shipment of manganiferous ores went to Ashland, Wisconsin, and since then these ores have been shipped to the Illinois Steel Company, at South Chicago; shipments have gone to Boyne City, Michigan; Chocolay, Michigan, and I was informed by the parties that were making these shipments that they were to ship some to Manistique, Michigan. One cargo went to the Bethlehem Steel Company, at South Bethlehem, Pennsylvania, and they are now getting up another cargo to go to some parties at Parry Sound, Ontario.

Q. This ore that was shipped to the Illinois Steel Company, was that mined by the Illinois Steel Company?

A. No; that was mined by some independent operators in the Cuyuna district and shipped all-rail to the Chicago Furnace.

Q. It was not mined by any Steel Corporation company?

A. No, it was mined by an entirely independent outfit.

Q. Has the United States Steel Corporation any interest in the Cuyuna district?

MR. COLTON: I object to the witness being called upon to testify on a subject with which he cannot be familiar. He cannot know as to how the Steel Corporation has bought up there indirectly.

By MR. REED:

Q. Of course, you will only answer as of your own knowledge.

A. Yes, to the best of my knowledge—and being familiar with pretty nearly all the parties that have interests openly, I am quite certain, looking at it in that light, that the Steel Company has no interest in that district.

Q. Will you tell us the names of some of the individuals, as distinguished from furnace companies, that do own ore lands there, which they hold for investment with the expectation of resale?

A. Well, the parties that have been most active in drilling in the district and who have ore deposits which are on the market—I will give you the following names: George H. Crosby, Archie Chisholm, John G. Williams, Francis Sullivan, R. C. Jamison, W. H. Cole, W. H. Allworth, A. L. Agatin, A. F. Gross, W. D. Edson, those parties all residing in Duluth. At Deerwood are Judge James T. Hale, Cuyler Adams, B. Magoffin, Oscar Carlson, John Oberg, P. A. Gough, Wilson Bradley, William C. White. At Brainerd we have Judge W. Holland, now deceased, R. R. Wise, W. A. Barrows. In addition to that, there is the Pine Tree Lumber Company, one of the Weyerhaeuser interests, of Little Falls. Longyear & Bennett, of Minneapolis, Daniel Waite, of Crosby; D. C. Peacock, of Brainerd; David Adams, of Chicago; Chester Congdon, of Duluth; L. E. Lum, of Duluth; R. F. Grant, of Cleveland; C. E. Pope, of Pittsburgh; J. Helmer, of Duluth; C. J. O'Connell, of Deerwood; William Harrison, of Duluth. Well, that will give you about the important ones that come to my mind at this time.

Q. Will you give us the names, if you can, of some of the furnace companies that are now operating or developing property in the Cuyuna?

A. The Iroquois furnaces, about which Mr. Tripp spoke to you yesterday in connection with the Rogers-Brown Ore Company's operations.

The Pennington Mining Company, the ores of which go to the Brier Hill Furnaces.

Tod-Stambaugh Company of Cleveland,

The Inland Steel Company of Chicago,

The Pittsburgh Steel Ore Company of Pittsburgh,

M. A. Hanna & Company's furnaces.

The Algoma Steel Company, of Canada, is exploring there at the present time, and the Shenango Furnace Company of Pittsburgh has ore bearing properties in the district.

Q. Did you mention the Republic Iron & Steel?

A. No; I did not mention the Republic Iron & Steel. They were exploring in the district at one time, but, to the best of my knowledge, they are not there now.

Q. How about M. A. Hanna & Company?

A. I mentioned M. A. Hanna & Company.

Q. Did you mention the Inland Steel Company?

A. Yes, sir.

Q. Are the limits of the Cuyuna range known yet?

A. No; they are far from being known.

Q. Are all the ore bodies that are likely to be found in that region now known?

A. Not in my opinion.

Q. Do magnetic surveys indicate any other ore?

MR. COLTON: Objected to on the ground that the magnetic surveys will best show what they indicate, and this is simply secondary.

MR. LINDABURY: This man is an expert.

MR. REED: Did you ever see a self reporting magnet, Mr. Colton? I never did.

MR. COLTON: I assumed you were speaking of some surveys that had been made, not some that were in his mind.

By MR. REED:

Q. Answer the question, please, Mr. Zapffe.

A. We know from experience that in the central parts of Minnesota, especially that portion occupied by the Cuyuna range, magnetic indications, when obtained through a proper kind of a survey, are indicative of iron-bearing formation. That iron bearing formation need not necessarily carry ore, but certainly we have found a very large proportion of ore in the Cuyuna district which is immediately associated with magnetic indications, magnetic lines and attractions, and ore bodies have been developed along the strike of magnetic lines and attraction and beyond the point where the magnetic indications cease.

CROSS EXAMINATION

By MR. COLTON:

Q. Mr. Zapffe, were you familiar with the understanding with which the United States Steel Corporation negotiated or

attempted to negotiate, with Mr. Congdon in respect to the ores to be acquired by him on the Mesabi range, more particularly the Canisteo ores, at the time he was acquiring them?

MR. REED: That is objected to as not cross examination.

THE WITNESS: I am not familiar with the transaction; no, sir.

By MR. COLTON:

Q. Were you familiar with the understanding that the Steel Corporation had with the Hill interests, or attempted to negotiate with the Hill interests, in respect to the ores to be acquired by them prior to the time that those ores were turned over and leased to the corporation?

MR. REED: That is objected to as not cross examination, and as irrelevant.

THE WITNESS: No; I am not familiar with that, either.

By MR. COLTON:

Q. Then, as to the relation that exists between the people that were developing the property, you simply speak from the records that you have seen up there and do not pretend to keep track of who may be financing the operations, do you?

A. Well, I get in touch, in a good many instances, with the people that are paying for these operations, but I would not say that in every instance I know who was paying for the work.

Q. You only know the open and avowed operators, is that right?

A. Yes, sir.

Q. The Cuyuna ore lies much deeper than the Mesabi ore, does it not, Mr. Zapffe?

A. Yes, sir.

Q. And it has a steep dip to it?

A. Yes, sir.

Q. And in the absence of a great deal of underground work the determination of the grade and continuity is a matter of considerable difficulty, is it not?

A. No, sir; the determination of the grade is made just

the same as it is made in any iron bearing district, where you drill and have your iron ore samples analyzed by competent chemists. That is the way the grade is determined in every instance, I believe; and the continuity, I believe, is figured on scientific bases.

Q. As to the determination of grade, how far do you assume the grade goes around? You drill down, and how far do you assume the same grade continues around your drill hole?

A. For fear that you may get the methods of exploration in the Cuyuna confused with what you are probably familiar with on the Mesabi, I will just say a few words in explanation, before answering your question directly.

On the Mesabi it is customary to explore by putting drill holes at equal distances throughout the forty, in checkerboard fashion, assuming that the result will cover, from a certain hole, a certain circular area around the hole. In the Cuyuna we do not follow that method, but we drill a cross section of one, two or three holes, or four holes possibly, which will show the foot-wall, the ore and the hanging wall, and in that way your width is absolutely determined.

Q. You drill that all the way down to the extreme depth?

A. No; in most cases you do not go away down to the extreme depth, because your holes go down to the depth of 400 or 500 feet and are stopped. In some cases they have drilled to a thousand feet.

Q. And at the lower depths you guess at it?

A. No; we do not guess at it. We do not assume beyond what the drill holes show.

Q. You do not assume beyond your cross sections?

A. No, sir; that is, as far as depth is concerned. I am talking about depth. As to the extent——

Q. But I do not understand exactly about these cross sections. How far down are these cross sections?

A. That all depends upon the individual explorer. In one case a man will start to explore and put down a hole in ore, with that formation dipping, say to the southeast; say it is about 100 feet wide. A vertical hole, if it goes far

enough, will cut through that inclined ore-bearing strata or ore bed. After that hole goes through that ore and goes into the foot wall, that hole is stopped. Then your depth is definite in that hole at that particular place. How much more goes below that you would not be able to tell unless you drilled another vertical hole at some additional distance to the south of the first hole,—or down the dip, in other words.

Q. In addition to those vertical holes do you make cross sections?

A. One hole may constitute that cross section. It may require two holes to constitute a cross section, and it may require three or four holes to make a cross section. A complete cross section is one which will show both the foot wall and the hanging walls and the ore bed between. An incomplete cross section would be one in which all those three conditions are not demonstrated. Say an ore bed is 100 feet wide and your drill hole is started in the hanging wall, that hole can be carried down through the hanging wall, the ore body and into the foot wall, and constitute in itself a complete cross section. Then it is assumed that the ore extends upward to the surface from all the points cut by the drill hole.

Q. And the width is assumed to be uniform?

A. No, it is not assumed; the width is determined by your drill holes.

Q. How many determinations would you have in that width?

A. That drill hole probably would not go down—in some cases it probably would not cut the ore body at a depth only 100 or 200 or 300 feet. In that sense, to answer your question, it is assumed to be uniform to the surface.

Q. It is assumed to be uniform to the surface?

A. Yes.

Q. And until there has been considerable commercial development in that region, from practical experience you can not determine whether that assumption is correct or not?

A. We know, from the way those ores developed in nature, that they develop from the surface downward, and in

my opinion it is not an assumption; it has been demonstrated in all the districts in the Lake Superior region, especially for inclined ore deposit.

Q. Is it demonstrated to any great extent in the Cuyuna Range?

A. To the best of my knowledge we have drilled almost entirely there with the idea of developing ore at the surface. If we had drilled more, and made some attempts with the idea of getting the ore at depth, we would be able to show up a much greater tonnage, than I have testified to here, at the present time. The mere fact that the tonnage is not greater is on account of the fact that we have not tried to develop the ores at depth, but we have been attempting to follow them at the surface, because in this district we have practically nothing to guide our explorations; there are no rock outcrops, as there are in other districts; the only thing we had was a line of magnetic attraction, and the ores might lie south or north or east of that magnetic attraction, and with anything from thirty feet to four hundred feet of surface, you have to proceed cautiously if you do not want to waste your money on explorations, and for that reason we have attempted to follow the ore at the surface.

Q. The exploration there, on account of the depth at which the ore lies, is much more expensive than it used to be on the Mesabi?

A. No, you are mistaken in that assumption, because the drilling is so much easier. It is easier to get through rock formations. We have lower drilling prices on the Cuyuna than on the Mesabi at the present time.

Q. I was not asking about to-day.

A. Formerly they were higher on the Mesabi than they are to-day. The explorations on the Mesabi were higher because those ore formations lie very close to the top. You understand I am talking on the basis of the price per foot.

Q. I am not asking about the price per foot, unless you are taking into account the closeness to the surface of the Mesabi ores at the same time as they existed in 1901. Are you familiar with the Mesabi in 1901, the explorations there?

A. No, I was up in the Mesabi in 1903; that is the first time I came on the Mesabi. But there a large portion of the drilling is done by diamond drill work, and it costs a much higher price per foot than we pay in the Cuyuna.

Q. How close to the surface, if you know, does the Mesabi ore lie?

A. I know of some cases where the ore comes within a very few feet of the surface, say ten or twenty feet; in other cases it does not come up to within a hundred or 110 feet.

Q. What are the limits at which the ore lies in the Cuyuna?

A. In the presently operated properties, I think the greatest depth is about 123 feet.

Q. And of those properties that are not operated, covering those you refer to as being 325,000,000 tons?

A. The greatest depth there is about 204 feet.

Q. What method of mining is used for those that are down about 204 feet?

A. We have none operated at the present time in 200-feet surface, but I presume that they will be operated by the underground method.

Q. What method is being pursued at 123 feet?

A. They are underground, too.

Q. What method is used generally in the Cuyuna?

A. Generally the underground method.

Q. Between the drill holes along the strike, about 300 feet apart, how many mines have developed and taken out the ore in between those holes, that you know of personally, in the Cuyuna range?

A. In the operations of the Kennedy mine the ore has been removed in places much in excess of 300 feet; in the Inland mine, removed at 300-foot distances; in the Armour No. 1, 300-foot distances; in the Armour No. 2, over 300-foot distances; the Pennington mine, 300-feet distances; at the Rowe mine, they have 300-feet distances; at the Barrows mine, 300-feet distances, and in the Cuyuna Mille Lacs mine they have exceeded 300 feet; in the Ironton mine they have 300-feet distances.

Q. Is that all?

A. Yes, I guess that is all.

MR. SEVERANCE: Is the Inland mine the same as the Thompson?

THE WITNESS: Yes, sometimes called the Thompson mine.

By MR. COLTON:

Q. In the Ironton mine, in how many cases have they developed up to or in excess of 300 feet?

A. The Ironton is a very, very small property, and in fact is so small that they have not an opportunity to demonstrate that more than twice. That is the extent of their ore body; it just cuts the corner of a 40-acre tract, and their underground operations follow along that entire distance across the corner.

Q. Will you answer the same question in regard to the Cuyuna Mille Lacs?

A. In the Cuyuna Mille Lacs property there was very little drilling done when that shaft was sunk, and the drilling that was done some of the time did not follow any regular method at all. Their underground operations will show drifts in excess of 300 feet.

Q. In how many places?

A. Well, probably two or three places that I recall now.

Q. How many shafts have they got?

A. One shaft.

Q. How far from that shaft do they go 300 feet, and in what direction?

A. They went once to the northeast and twice to the southwest along the strike. You see they have got about a 600 or 700-foot drift along their ore deposit.

Q. How many holes have they got altogether?

A. They have got a fractional tract amounting to about 80 acres—about ten holes on the whole eighty.

Q. Out of those ten they have developed out on how many, did you say?

A. What is that question?

Q. On how many have they developed out 300 feet?

A. I figure this way: they have got about 700 feet underground operations along the strike, and that would give them at least two (2) three hundred feet distances. Some of their

drill holes are away down at the other end of the property; nowhere near their underground work.

Q. They have not developed between drill holes at all there, have they?

A. Sure; certainly.

Q. How developed?

A. Well, they have got— I don't know, I do not quite catch your question. Their underground operations consist of a shaft, at the bottom of which they have a level, at about 200 feet depth, and another level about 180 feet depth; and from those levels, especially their lateral operations in the lower level, they get an extent of 700 feet along the strike of the ore deposit.

Q. That is, in one end of the property they have done that?

A. They have done that, yes.

Q. At the other end of the property, or on the rest of the property they have not done any?

A. No; they have not done any work there.

Q. No work at all?

A. No.

Q. How many drill holes have they on that side, that is, the side other than the one you spoke of?

A. The undeveloped side?

Q. Yes.

A. I think there are obout three or four drill holes down there.

Q. You do not know what is between those drill holes?

A. The greatest distance you get there between the nearest drill holes would be about 500 or 600 feet, I believe.

Q. Apart, you mean?

MR. LINDABURY: Let him finish his answer.

MR. COLTON: I simply wanted to know whether it was apart.

THE WITNESS: It would be about 500 or 600 feet. Now, the underground operations extend out beyond what the nearest drill hole to the shaft would show, but it does not reach the drill hole the farthest away from the shaft. Now, between those two holes, then, we assume that the same kind of

material exists that is shown by those two holes and part of that underground operation. That is a manganiferous ore.

By Mr. COLTON:

Q. That is entirely an assumption, is it not?

A. Well, it is an assumption, but, you have about 400 feet between drill holes there, of which the 150 feet you are justified in assuming that one drill hole will show, will give you about a hundred foot assumption. There is a hundred foot assumption in there which we will assume is manganiferous ore.

Q. Do you know what those particular drill holes showed that you are speaking of now?

A. Certainly.

Q. Do you not put down a great many holes where you do not get any ore at all?

A. Why, certainly; but these holes are in ore. I do not use the word "ore" when there is no ore there.

Q. How do you know that there is ore where there have not been any drill holes put down, and where it has not been carried on as described on the other end of the property?

A. We have two holes there. The most southwesterly hole is about 500 or 600 feet away from the next nearest hole to the northeast. The underground operations go still farther to the northeast, but also southwestwardly to the second hole to which I referred. The second hole is in ore and this hole to the southwest is in ore, and if we will assume that the ore extends 150 feet, that will leave you about 100 or 150 feet in there which is a pure assumption, but the underground drift being in ore and this drill hole being in ore and that drill hole being in ore, and they all being along the strike, I do not see how you can assume anything else in there except ore, or, at least, iron-bearing formation.

Q. Are there not holes put along a strike occasionally that do not show any ore?

A. Yes, surely.

Q. Take up the Barrows Mine; how many shafts have they down there in that?

A. When the operator started working on this property he put down a small shaft—they started a shaft directly on

the ore body. They went down about 80 feet when they encountered quicksand, and it being a small shaft, they sealed that shaft and went 300 feet to the southwest, backed up about 100 feet or so away from the ore deposit, and then sank their so-called No. 2 shaft. Their plan was to follow this work up with another shaft 300 feet to the southwest, which would be their main operating shaft. Now, the No. 2 shaft went down about 96 feet of surface and continued to a depth of about, I believe it was 160 feet, when they started crosscutting. They ran a crosscut to the northwest entirely through—no, not entirely, but they ran it northwesterly about 100 feet and stopped in some lean iron-bearing formation to the northwest of the main ore body. Then they started drifting on the ore body itself; came back on the crosscut and started drifting to the northeast and to the southwest, and they have gone 300 feet in each direction.

MR. LINDABURY: Are they in ore?

THE WITNESS: Yes.

By MR. COLTON:

Q. In that case they put down one hole and abandoned it, and in another case they went 100 feet and struck lean ore; is that correct?

A. Well, I did not say anything like that.

Q. Did they not stop within 100 feet there, having reached lean ore?

A. No. I said they started sinking a shaft; not a drill hole. They put down a shaft and went down 80 feet, and then the quicksand was too much for the small shaft. It was merely a test shaft they were putting down there. If that shaft had gone down, they had planned on using that as a timber shaft and for ventilating purposes. But that quicksand being too much for that small shaft to handle, they sealed that shaft and went 300 feet to the southwest and sank another shaft from which they intended to hoist ore; not a drill hole, but a shaft. That shaft got through all right. Then they drove their crosscut about 100 feet and then they drifted about 300 feet, and those are underground operations.

Now they are going to connect up with the shaft they

failed in the first place to get down. Now, that is not an abandonment because they did not find ore.

Q. How many drill holes does that concern have altogether—the Barrows?

A. They have 25 drill holes.

Q. How many have they connected up by development?

A. The drilling on that property was conducted in a very systematic manner, and those drill holes are all located in cross-sections 300 feet apart along the strike of that ore deposit. It will give them about six cross-sections all told,—as those holes are located.

Q. How many have they developed up? How many of those holes sunk along the strike have they connected by development?

A. Well, they have connected two cross-sections by actual underground development, and those two—no, they have connected three cross-sections by actual development, which will give you a distance of 600 feet, and as I recall now, those three cross-sections have from ten to twelve holes.

Q. Are those along the strike?

A. Yes, sir; along the strike, and I do not think—if there are twelve holes in those three cross-sections I do not think there are more than two of them that are in barren rock. The others all showed ore.

Q. But some do show barren rock?

A. Oh, yes, certainly.

Q. With the balance of the mine undeveloped, they do not know how many of those are going to show barren rock?

A. Well, it seems to me that when a drill hole goes in ore and you send this ore material to a chemist and have it analyzed, and it shows it contains 50 or 60 per cent. iron, that certainly is iron ore and not barren rock. Now, then, if the underground operation goes toward that drill hole, how can it help hitting anything else but material that you would call ore? You certainly would not call that barren rock.

Q. In your cross-sections, two of those connected up struck barren rock, did they not?

A. No; you do not understand me.

Q. Well, what struck barren rock?

A. There were twelve drill holes in those three cross-sections. We will say those three cross-sections each had four holes in them.

Q. Vertical or what kind of holes?

A. Some were vertical and some angle. Three cross-sections, each containing four holes. Now, let us suppose that one hole in two cross-sections, on the northwest side of that cross-section, went into barren rock—green rock or green schist, as we call it locally. Knowing that the ore deposit dips to the southeast, those two holes went into what is known as the foot wall,—barren rock. When that company begins to operate underground they are not going anywhere near those two holes, unless they have some purpose such as putting in a pumping station there, or something like that, but they will confine themselves to operating around those other ten holes which chemical analysis showed, while they were doing their exploratory work, contained ore.

Q. Do you know how far from those holes that ore extends?

A. In which direction?

Q. In any direction.

A. Why, yes; by referring to this specific case I know in these other cross sections that ore positively extends 600 feet.

Q. They have made cross sections in how many cases?

A. They have made cross sections in about five or six cases.

Q. Five or six cases?

A. Yes.

Q. And in those cases you know, but in the other cases you do not know?

A. In the other cases I know there is ore at those cross sections, because the drillings show there is ore there.

Q. Do you know how far it extends from the hole, without cross sections being made?

A. I assume it extends 150 feet on each side of those cross

sections; and if two cross sections are 300 feet apart, that means ore is continuous between those two cross sections.

Q. You assume it extends 150 feet?

A. Yes; and in my direct testimony I stated also that the underground operations have proven, in several instances, that the ore does extend this distance, and we are perfectly justified in making that assumption.

That assumption was started with the idea of estimating tonnages, and was perfectly proper, just the same as they used their particular system on the Mesabi range,—that so-called "checkerboard" system.

Q. I wish you would give the instances you named for the basis of your assumption in the Barrows mine; all the instances you can.

A. I just got through telling you the underground operations have shown, at the Barrows mine, positively, that ore extends there for 600 feet between the cross sections, which are 300 feet apart. That is positive.

Q. That is true in three cases?

A. That is positive in that property.

Q. In three cases?

A. Yes.

Q. Is that one of the properties on which you base that?

A. Yes, sir; that is one of the ones.

Q. Is the Rowe another?

A. Yes; the Rowe is another.

Q. Name all the instances in the Rowe.

A. In the Rowe I know of one instance, because this property is being stripped, and they had exposed, at one time, the ore there for a distance of several hundred feet.

Q. Is that the end?

A. Yes, sir; that stripping is being removed by hydraulic means, and after they had the ore exposed—because they wanted to get a sample shipment to send to the furnaces to test the ore——

Q. That is not an answer to my question.

A. (Continuing)—they washed some dirt down in again.

and it is now covered. You cannot see it to-day, but you could see it in the early part of the season.

Q. Will you give all the instances in respect to the Armour No. 2?

A. In the Armour No. 2, when the parties operating that mine started their work, they made one cross section consisting of six or eight holes in the west side of the property. They immediately struck good ore in that cross section. Inasmuch as they were operating the adjoining property at that time, they felt they had sufficient evidence there to show that there was a lot of ore there, and they sank a shaft on the strength of that one cross section, and they have since conducted underground operations to the extent of over 1,000 feet along the strike of that ore body, with only that one row of holes in there. Now they have gone ahead on the east side of the property, on the east forty, and have drilled a few more holes over in there, to find out whether that ore continued; and the party that is operating that property told me the ore continues. They have discontinued their explorations.

Q. One moment. I object to that as hearsay.

A. I do know this, and I have seen the underground map and know that ore extends for 1,000 feet. That is the mine ore map.

Q. Who made that map?

A. The Rogers-Brown Ore Company.

Q. The map is hearsay.

A. It is not hearsay. It was given to me for particular purposes.

MR. COLTON: I object to the map as hearsay and secondary, and not produced.

MR. LINDABURY: You seem to be the ones who are making proof of it. You cannot object to your own evidence, much less except to it.

MR. COLTON: I am cross examining on that, already having entered an objection to so much of the testimony as is based on hearsay.

By Mr. Colton:

Q. Give the instances in the case of Armour No. 1.

A. The Armour No. 1 has about twenty holes, and those holes are located so as to form four cross sections. The mine contains only one forty-acre tract. The ore body on that property runs pretty nearly east and west. Those cross sections are slightly closer together than the 300 feet distance. As I recall—while they are slightly less—they are probably about 250 feet or so. I was underground in that mine a short time ago, and went across the whole forty, and there is ore all the way. In fact, there is ore so far eastward that they have extended the underground operations to the adjoining property, the Armour No. 2, where they had never done any drilling and did not know there was ore; but the underground operations in the Armour No. 1 showed them there was ore on Armour No. 2, and they have connected the two mines through territory in which they never even suspected there was any ore.

Q. Give the instances that you know of for the Inland property.

A. The Inland or Thompson mine consists of three forties, running north and south. The property contains two distinct ore bodies, referred to as the South and the North. The shaft was placed midway between these two ore deposits, and two crosscuts were driven, one to the southeast and one to the northwest, to tap the respective ore bodies. The south ore body has about 27 or 30 holes on it, and the north ore body has pretty close to 60 holes. Now, those cross-sections are——

Q. I did not hear you mention how many of the cross-sections.

A. Yes; well, I will get to them. On the south ore body they have about seven cross-sections. On the north ore body they have been drilling very recently, and I do not know how many more cross-sections they have started, but they must have at least seven, six or seven cross-sections on that. Those cross-sections are a little bit closer than 300 feet.

After the crosscuts struck these ore bodies, the company started drifting along the ore deposits in a northeasterly and

southwesterly direction, and those drifts, as I recall at the present time, I think must have gone about 800 feet, all told; that is, each one separately went about 800 feet in a northeast-southwest direction. That mine has been shut down, and the stripping operations have been commenced on the south ore body. They are going to remove that ore by steam shovel.

After that pit is in operation, their plan is to strip and mine the north ore body that way. They are still drilling at the present time on that ore deposit.

In that mine you have two ore deposits and two cases where the underground operations extend beyond the ore shown by at least three or four cross-sections.

Q. In every case these cross-sections showed ore all the way?

A. Yes; continuously; so much so that they were —in fact, the superintendent of the Inland Steel Company told me——

Q. One moment. That is objected to as hearsay.

A. (Continuing) It resulted in this: they felt so much surprised over the expectation that they had, that they have gone——

Q. That is objected to as a voluntary statement.

MR. REED: He is not giving a statement.

MR. COLTON: That is objected to as a voluntary statement on the part of the witness.

MR. LINDABURY: The witness was asked for what he knew and what his information was, and he is giving it.

By MR. COLTON:

Q. Go ahead and answer.

A. The superintendent of the explorations informed me that the results that they got in their underground operations exceeded their expectation as judged by the drill records, and that was largely what tempted them to conduct additional drilling, with the view of stripping these ore deposits, which would make a cheaper operation for them.

Q. What depth is that?

A. About 63 feet of surface.

Q. Give the instances in the case of the Kennedy.

A. The Kennedy mine is the oldest of all the mines which

I have enumerated. Some of the very earliest drilling that was done in that territory was done at the Kennedy mine. I do not suppose you will find a property anywhere in the entire district in which the drilling was done in so promiscuous a manner as it was done on the Kennedy property. That property consists of about 240 acres, a little bit over 240 acres. The holes were punched down here and there, and the drilling was done over a period of long years. That drilling was conducted by four or five different parties, at different times, so there is no system there at all.

I have the supervision of some of this underground work on part of this mine. The property is made up of four leases. In this particular portion of the property the operators went ahead and first ran a crosscut to the north, toward one drill hole up there that showed some ore. Then they started to drift on this ore to the northeastward, where there were no drill holes at all; and the farther northeastward they went, the more ore they got and the better ore they got, until to-day I believe they have got a bigger tonnage there than we had ever dared to even estimate from the drill holes.

Now, their underground operations on the balance of that property are of similar character entirely.

Q. Now, are those the only instances that you had in mind in making your assumption that you referred to in answering Mr. Reed's question, on the Cuyuna range?

A. Well, we still have the Pennington to discuss. The Pennington consists of two forty acre tracts. The ore body is on one forty. That is, the ore body on which they are now operating is on one forty acre tract. On that property they drilled about 22 holes, forming four cross sections three hundred feet apart. That drilling was done by George Crosby. The Todd-Stambaugh Company, when they took an option on the lease, put in a few check holes, and they got better results in their check holes than Crosby did in his drilling. They stripped this property with a steam shovel and they are taking ore to-day out of that property with a steam shovel, and their expectations as they formed them, judging from the drilling alone, I dare say have been exceeded in every in-

stance. That ore is continuous throughout that pit from one cross section to the other. There is no question about it, you can see it, you can walk on it.

Q. Are those the only instances?

A. Those are the only mines that have got down far enough; you asked me for underground operations where we can demonstrate that, and those are the only instances.

Q. What portion of those drill holes do those connected up and developed, in the manner you described in justification of your assumptions, constitute of all the drill holes along the strike in that district?

A. I believe I stated in my direct examination that 374 holes were on the mining properties that I listed, and that about 3,500 holes in addition to that were drilled throughout the district. Probably 3,000 of those 3,500 holes are located in the ore bearing area, so that the proportion of holes on those properties which were to ship or are shipping to the total is about 12 per cent.

Q. What proportion are the holes connected up along the strike to the total number of holes connected up by development?

A. I have just made a calculation here of the number of holes that have been connected up, in order to answer this question of yours, and I find that there is just about half of the 374 holes.

Q. Half of the 374 holes have been connected up?

A. They have been connected up by underground operations.

Q. Half of the 374 are connected up by underground operations?

A. Yes.

Q. What 374 are you now speaking of?

A. That is, just a trifle over 40 per cent. of the 374 have been connected.

Q. What per cent. of the total holes in that Cuyuna district along the strike?

A. That same calculation will give me 5 per cent. of the total holes drilled along the strike.

Q. A great many of the 3,500 holes along the strike do not show any ore, do they?

A. Yes. There are a lot that do not show ore; if eliminated that would raise your percentage; that would make it over five per cent.

Q. Of those that show ore?

A. Yes.

Q. Do you know how many showed ore and those that did not?

A. I could not give you that without quite an extensive calculation.

Q. Those 374 holes are the holes that you refer to as in the class comprising 92,000,000 tons of merchantable ore?

A. Yes.

Q. What does that ore average over the Kennedy mine; what has it averaged in iron content and phosphorus content?

A. I never saw the complete analyses of the shipments of those ores, and all I can testify to there is what the manager or the superintendent informed me. That is all I can say as to that.

Q. Can you answer of your own knowledge as to the analyses from any of those properties, in respect to iron content and phosphorus?

A. Well, I have seen cards, chemical analysis cards showing the analyses of carload shipments, and that is as far as I can testify in regard to that.

Q. Which properties have you seen those cards for?

A. I have seen them for the Kennedy, for the Armour No. 1 and the Armour No. 2, the Pennington, the Cuyuna Mille Lacs, and the Ironton, and I have seen cards for the stock pile at the Barrows mine.

Q. Do you know what extent that covers of the total shipments, the cards you have seen, or have they just been samples?

A. No, I could not say.

Q. How far apart are these drill holes along the strike, outside of this district in which you have included that 92,000,000 tons of merchantable ore?

A. In cases where parties are trying to explore their properties in a systematic manner, the general custom is to put them 300 feet apart; a good many of them do it at less distances than that.

Q. Do you know what distance they are apart as a matter of fact?

A. Yes.

Q. Don't you know that a great many of them are about a quarter of a mile apart?

A. If you go a quarter of a mile you will probably get on the other fellow's property by that time. It is considered another property again in those instances. You see, these properties are not held in very large groups; they are generally small owners. You will perhaps find these properties as a forty or an eighty. It is rare that a fellow has 160 acres.

Q. You have no knowledge as to how far apart those drill holes are along the strike?

A. Yes, I have.

Q. What distance?

A. I just gave you that. In prevailing cases they are 200 feet or 300 feet, and maybe they will be only 100 feet. But I know of instances where the nearest bits of exploration,—well, I do know there are gaps along the strike where there have been no holes for a quarter of a mile or a half a mile, and in some instances the probabilities are that it may be a mile.

Q. On what basis have you estimated that 305,000,000 tons of ore as distinguished from the manner in which you estimated the 92,000,000 tons?

A. That computation there is based on 129 estimates that I have made of different ore properties in that district; that covers practically all the ores of any consequence there.

Q. What area does it cover?

A. I think that covered about 260 40-acre tracts. That would be a little over 10,400 acres.

Q. Will you give the outside limits and the boundaries of that 10,400 acres in a way to indicate where it is and how it is located?

A. As was testified yesterday by Mr. Crosby, the Cuyuna

district is divided into the north and south ranges. On the north range we have several ore bearing horizons. My estimates for the north range would cover land in townships 47 north, range 28 west, 47-29, 46-29, and part of 46-28. On the south range that would cover estimates for ore bodies in townships 46-28, part of 46-29, 44-28, 45-29, 45-30, 45-31, 44-31, 43-32, and 44-32.

Q. In giving those numbers are you giving the parts of the townships or the entire townships?

A. I am giving the numbers of the townships in which these ore deposits are located, and in giving those figures I have separated them so that you could get the townships for the north and south ranges separate. You will find ores in all those townships that I have given you.

Q. Are these ore bodies, constituting 10,400 acres, contained in two separate districts?

A. Well, we speak of the Cuyana "District" as a unit, and we divide that "district" into two parts, called the "North Range," and the "South Range." Now, the north range and the south range are about four to six miles apart. You see, they run parallel, about four to six miles apart.

Q. Are these ten thousand acres that are located partly in the south range and partly in the north range, continuous ore bodies in the south range and continuous ore bodies in the north range, respectively?

A. They are continuous in their respective localities, yes.

Q. You have taken the entire tract in each of those ranges or parts here and there?

A. Oh, no; I have just taken the parts here and there, wherever we know the drilling has showed ore.

Q. As I understand it, you assume the ore to extend from each of these drill holes a certain distance in width, as you did in the case of the 92,000,000?

A. Yes.

Q. And what was your assumption in this case?

A. We used the same assumption.

Q. But in this case the assumption is not based on development?

A. Not on those particular properties, no.

MR. REED: By "development" you mean mining operations, I suppose?

MR. COLTON: Yes.

THE WITNESS: Yes.

By MR. COLTON:

Q. What proportion of those drill holes did you sink yourself, or were made under your direction?

A. I have had the direction of sinking about 600 drill holes out of the 3,500.

Q. About 600 were sunk under your direction?

A. Yes; I believe it is more than that.

Q. And in the other cases you made your assumptions based on data furnished you by other persons?

A. Yes.

Q. And not gathered by yourself?

A. Yes.

MR. COLTON: I renew my objection to the witness's testimony as based in part, according to his own statement, upon data not produced, and as hearsay.

By MR. COLTON:

Q. Are you financially interested in any of the properties in the Cuyuna range?

A. No, not any that has any ore on it. I got in on one property at one time, but we did not get any ore on it. I got left on that. That is the extent of my investment.

Q. You took an option on it or bought it?

A. No; several parties and myself bought it outright.

Q. Did you buy it on indications of iron or ore?

A. Yes, we bought it on indications of iron.

Q. And you expected to get ore there?

A. Yes, sir.

Q. But you did not?

A. We did not get it, as far as that drilling went. I do not mean that we have given up hope on it.

Q. You appear as an expert in this case, and expect to receive compensation for your testimony?

A. Yes, sir.

MR. LINDABURY: What was that question?

MR. REED: He asked if he was an expert in this case and expected to receive compensation for his testimony.

MR. LINDABURY: I assure you he will receive compensation.

MR. COLTON: That is all.

REDIRECT EXAMINATION

By MR. REED:

Q. Mr. Zapffe, there has been a good deal said in your cross-examination about what is called an assumption that the ore continues between these drill holes. I wish you would state whether or not that is the customary way of estimating reserves on the Cuyuna range?

A. Yes, sir; it is. We have had quite a good deal of discussion about that amongst engineers who were making calculations in the district, and it was a method I adopted when I first went into the district, and I am pleased to state that the other engineers who are now making those estimates have carried out my plans in that respect.

Q. Will you state whether or not it is customary on other ranges in the Lake Superior district to assume that the ore continues between drill holes set in at the ordinary interval?

A. Yes; it is customary to establish definite means.

Q. Is there any other way of estimating the reserves?

A. No; there is not.

Q. Is it or is it not customary in other mining districts within the Lake Superior region?

A. Yes, it is customary in every locality. Each district has peculiarities of its own, and in making estimates in each locality you establish some definite method, and you follow that method throughout.

Q. Are properties bought and sold on that basis?

A. Well, that is the only basis we have for determining the value of properties when they are bought and sold, and we have been spending a great deal of money based on those calculations.

MR. REED: That is all.

RECROSS EXAMINATION

By Mr. Colton:

Q. What properties on the Cuyuna range that you know of have been bought and sold on that basis?

A. Well, I have been recommending the purchase of properties to the Northwestern Improvement Company ever since I have been in that district, and we have bought properties that had developed ore on them, and we paid for them on the basis of the ore that was demonstrated by the drilling, because the other fellow would not sell unless he got paid for whatever ore he thought he had.

Q. Just what ore was demonstrated by the drilling, and what was the property, and also what was paid per ton for the ore?

A. What was paid per ton for the ore?

Q. Yes.

A. Well, I do not think that the price has ever exceeded about eight cents; seven or eight cents.

Q. Seven or eight cents a ton? That is, for the fee ore?

A. Yes.

Q. Is that the only property you know of in the Cuyuna selling in fee?

A. The only what?

Q. The only property in the Cuyuna you know of sold in fee?

A. No; I said that is the greatest price ever paid for it. I recall one which I know was purchased after it had been drilled, on the basis of the developed tonnage. That was bought about—oh, about five years ago, and they only paid five cents a ton for that.

Q. That was on ore shown up?

A. Yes.

Q. It was paid for on the basis of ore shown up, at the rate of five cents a ton?

A. Yes.

Q. And some was paid for on ore shown up at the rate of eight cents a ton?

A. Yes.

Q. And those are the two instances upon which you base your statement that ore is bought and sold in this region upon the assumptions that you have made?

MR. LINDABURY: Oh, no; he did not say that.

MR. COLTON: He can explain it.

MR. REED: That is a statement; not a question.

MR. COLTON: In the form of a question.

THE WITNESS: No; there have been other properties that have been taken over after exploration has been done on them. Leases have been assigned on the basis of ore developed, and there have been moneys paid for the assignment of those leases, and the amounts that were paid for those assignments were established on the basis of the ore shown in the ground. I know of an instance where the bonus—the amount paid for the assignment—was of such an extent as to make the value of that ore by the time they get through paying the royalties on it almost double what the lease calls for.

By MR. COLTON:

Q. Is it correct that those were the only cases of sales of fee property that you have in mind or know of?

A. On the basis of developed ore, yes.

Q. Now, as to leases on the basis of developed ore, give all the instances you can, and state the royalty in each case and the bonus.

A. Well, if I understand you correctly, you want a list of all the properties that have been leased—that is, you want the royalties and a list of properties that have been leased.

Q. Yes, having bonuses or leases bearing any relation to the development in the property.

A. Well, I know of a twelve and a half cent lease on which a bonus of——

MR. REED: (Interposing) Do you ask him only for leases which have been sold after they have been made?

MR. COLTON: No.

MR. REED: Or do you want leases which have not been resold for any bonus?

MR. COLTON: There might be a cash payment, which would be the same thing as a bonus. I think the witness understands it.

MR. REED: Do you want the terms of all leases or only leases which have been resold?

MR. COLTON: I asked for bonuses, which would mean there had been a resale.

MR. LINDABURY: What did you say?

MR. COLTON: I asked for bonuses as well as royalties. The fact that a bonus was paid would mean that a resale was made.

MR. LINDABURY: Not necessarily.

MR. COLTON: Unless there was a cash payment in the first instance. I will let it apply first to the resale leases, and secondly to those that have been made with a cash payment in the first instance, as well as a royalty.

THE WITNESS: Well, there is an instance of one explored property in which the sublease amounted to about twelve and one-half cents, on which a bonus of about $150,000 was paid; that was after deducting the cost of the explorations on the property and the royalties which had been paid up to that time.

MR. DICKINSON: Read that answer, please.

(The answer was read by the stenographer.)

By MR. COLTON:

Q. What property was that?

A. Well, am I supposed to answer that question?

MR. REED: Unless it would betray some confidence.

THE WITNESS: Well, I think answers to questions like that would. I do not believe that anybody is supposed to know what property is being referred to in those cases. Those matters were handled confidentially at the time, and I think I ought to be excused from giving a description of the property.

By MR. COLTON:

Q. Is there a deed of record?

A. No; the lease has not been recorded, just for that reason.

Q. How many acres were there in that transaction?

A. Eighty acres.

Q. How many drill holes had been put in that property?

A. Fifty-four.

Q. How many of those drill holes had struck ore?

A. Oh, 40; a little bit over 40, probably.

Q. How much ore was there, under your theory?

A. Well, I do not recall just exactly what that estimate was. It was somewhere between—well, it was not less than two and a half million, and it was not in excess of four million tons. I know that.

Q. Would that be the amount, according to your method of calculation?

A. Yes. It was somewhere in there, between two and a half million and four million tons. I do not remember exactly what it was, but it was somewhere in there.

Q. Now, are those the only instances of this character?

A. Oh, no.

Q. Well, go on and name the others.

A. Another case, the sub-lease amounted to 35 cents, and a cash bonus of $80,000 was paid. That property had 160 acres; had about 60 holes, and the estimate of the tonnage on that which could be mined was about ten million tons of merchantable ore. Now, of those sixty holes there were about fifteen or eighteen that did not hit any ore, and of those fifteen or eighteen holes there were only six holes that did not hit any iron formation. Six holes that did not hit iron formation, and the rest of them went into iron formation, but did not hit any concentration—no ore.

Q. Are there any other instances?

A. Well, there is an instance where 120 acres, and a tract in another case of 240 acres——

Q. (Interposing) Will you finish with the 120 acres first, unless they adjoin?

A. Well, I am going to give you those together. These two were treated together. One tract was 120 acres, and the other was a 240-acre tract.

MR. DICKINSON: 360.

THE WITNESS: That was taken over without any bonus, and we repaid in that transaction the total investment, in-

cluding the royalties that had been paid on that lease, and the consideration outside of that was an advance in royalty when that ore is shipped.

By MR. COLTON:

Q. What was the rate of royalty?

A. Fifteen cents for ores that were selling at less than $3.25 at Cleveland, when shipped there.

Q. How much was repaid there?

A. I do not recall the exact figure for that; it was a little bit in excess of $100,000.

Q. That is approximately?

A. Yes.

Q. How many tons are there according to your method of calculating or estimating?

A. As I recall on those two together there were probably about 19 or 20 million tons.

Q. Are there any others, in addition to those named?

A. I believe, to the best of my recollection at the present time, that is about all where I had any direct connection with the transaction. I believe there are ones of similar character on which explorations were conducted by other parties, with the terms of which I am not familiar.

Q. Do you know, of your own knowledge, of any leases in which there was no bonus other than that instance in which there was $1,000 paid, or something like that, for past work?

A. No; that is one of the characteristics of the district, that when a fellow wants to take an option for a lease on a piece of property to drill, they invariably want a cash payment in advance, to be forfeited if you do not discover any ore. In some cases they will allow you to apply, if you do find ore, and in some cases they will not allow you to apply the payment as advance royalty.

Q. Going back to the developed lands, do you know of any instance in which leases, of your own knowledge, have been taken on developed lands in which no bonus was paid?

MR. SEVERANCE: You mean where an original lease was made?

MR. COLTON: Where the ore land had been drilled.

THE WITNESS: In which a lease was taken out but no bonus paid?

By MR. COLTON:

Q. Yes.

A. And had been previously drilled by other parties?

Q. Yes.

MR. SEVERANCE: You mean, do you not, that it might have been drilled by the owner, and the owner may have leased?

MR. COLTON: Yes; the owner may have leased, certainly—anybody.

THE WITNESS: No. In those cases they generally request that you pay back the amount of money that they expended for explorations. That would be the extent of the bonus.

By MR. COLTON:

Q. Are these properties that you have been speaking of developed otherwise than by drilling?

A. Yes; one of the properties had had an exploration shaft on it.

Q. But the rest of the properties that you have named were developed to the extent of having been drilled?

A. Only drilled.

Q. Only drilled?

A. Yes.

Q. And you gave all the instances you could of such sales where the property had been developed—drilled—did you not?

A. No; there are quite a few properties that were taken over in which there had been a small amount of drilling done and on which it was necessary, when we took leases on them, to pay a bonus to pay back for that drilling that the other party had done before we had taken it.

Q. Was that payment made in the nature somewhat for the privilege of further exploration in leasing, in the nature of an option, as well as for the ore development?

A. The terms would be of this character: Supposing you had a 40-acre tract, and had done some drilling on it, and you would want to lease that property to me. Perhaps you would

give me an option and perhaps just a direct lease. That is immaterial. The lease will call for 20 or 25 cents royalty, or 30 cents royalty, and the minimums would be so and so much. In addition to that, you want $4,000 or $5,000, or $1,000, you want me to pay you, to cover expenses on the property for the drilling which you have done on it prior to this time. That is a payment, in most cases, which is never applied as advance royalty at any time in the future. However, there are some instances in which those payments of that character have been applied as advance royalty at some later date.

Q. Are those absolute leases or conditioned on finding ore?

A. No; I know of several instances in which the party had drilled and demonstrated just a little bit of ore, and the lease was taken outright. Drilling was conducted immediately afterward, to see that there was enough ore there to justify the terms of the lease, and the lease has been carried and the bonus had been paid before.

Q. Aside from these instances that you have just spoken of, in which there comes into consideration the exploring of property, in addition to there being a little development on it, and payment for past services, have you any other instances of leases of property made on the basis of drilling holes already made and ore discovered—other than those which you have given?

A. I just happen to recall one which may be what you are looking for, in which 480 acres were involved. That provided for an option of lease, at 15 cents a ton.

Mr. Dickinson: An option lease?

The Witness: An option of lease, yes. The parties who owned the property had done some drilling there of their own account, to the extent of about $18,000 worth of drilling.

By Mr. Colton:

Q. How many holes?

A. There were twelve holes. The option ran for a year. There were about 20 more holes drilled, and the lease was then taken. That $18,000, although it was paid back with the idea of repaying this party for his exploration, which money,

of course, he would have kept if the option had been dropped—but the option was exercised, and one of the conditions of the option was that if the option was exercised, this money was to be applied as advance royalty at some time in the distant future, whenever the mining is in excess of the minimum called for by the lease agreement.

Q. And there was no bonus other than that specified?

A. No.

Q. None other than that $18,000?

A. No.

Q. And other than these option leases, of the character you have just named, you do not know of any sales or leases in which bonus was paid—other than those you have already specified?

MR. REED: That is, of his own knowledge?

By MR. COLTON:

Q. Yes, of your own knowledge?

A. I know of others that have made transactions of that character, of which I am not familiar with all the details, but I know that money passed hands, because the parties that passed the money told me so.

MR. COLTON: That is all.

MR. REED: That is all.

(Whereupon a recess was taken until 2.15 o'clock P. M.)

AFTER RECESS.

WILLIAM N. MERRIAM

was called as a witness on behalf of the defendants, and being first duly sworn, testified as follows:

DIRECT EXAMINATION

By MR. REED:

Q. Where do you live?

A. Duluth, Minnesota.

Q. How long have you lived there?

A. For about ten or twelve years I have made that my headquarters and called it my home.

Q. What is your occupation?

A. Geologist.

Q. Did you live in the Lake Superior district prior to going to Duluth?

A. I worked in the Lake Superior district.

Q. How long have you been familiar with Lake Superior ores?

A. About thirty years, since I started to work there.

Q. About thirty years?

A. Yes.

Q. In what year did you start?

A. In 1883.

Q. What is your present position?

A. Geologist for the Oliver Iron Mining Company.

Q. How long have you been geologist for the Oliver Iron Mining Company?

A. Since the organization or shortly after the organization of the Steel Corporation.

Q. Prior to that time what was your occupation or your position?

A. I was with the Minnesota Steel Company as geologist.

Q. Is that one of the subsidiaries of the Steel Corporation?

A. It is.

Q. How long were you geologist with that company?

A. Between two and three years.

Q. You mean the Minnesota Iron Company?

A. The Minnesota Iron Company.

Q. And prior to that what was the nature of your work?

A. I was doing general geological work, and the examination of the Lake Superior fields for various private parties, and for some companies.

Q. And that had been your occupation, had it, since 1883?

A. Yes.

Q. At the present time are you familiar with the Michigan ranges?

A. Fairly so, I think.

Q. Are you familiar with the Gogebic, the Marquette and the Menominee?

A. Yes.

Q. Are you familiar with the Vermillion in Minnesota?

A. Yes.

Q. And with the Mesabi?

A. I am not as familiar with the Mesabi as I am with the other ranges.

Q. You have your greatest familiarity then with the four that are known as the old ranges?

A. The four old ranges.

Q. Are you familiar with recent development work in the older ranges?

A. I am.

Q. In which ranges has that work been most noticeable?

A. On the Menominee range, in recent years.

Q. In what district on the Menominee range?

A. In the Crystal Falls and Iron River districts.

Q. Have there been any recent developments in the Gogebic range?

A. There have.

Q. Are you familiar with them?

A. I am familiar with their location and know the results of some of the drillings.

Q. Have you studied the extent of the iron bearing formations in which those old ranges lie?

A. I have.

Q. What is your opinion as to whether or not the ore bodies have all been developed at this time?

A. In my opinion they have not all been developed.

Q. Is ore of any quantity likely to be developed in the extension of those ranges?

A. Yes, it is.

Q. You are familiar with the figures in the report given by Mr. Finlay and printed by the Michigan Tax Commission, are you?

A. I am.

Q. That report was made when?

A. In 1911.

Q. Since that report was made in 1911, have there been developments of additional ore bodies not mentioned in his report?

A. There have.

Q. About what tonnage of ore has been developed in those three ranges in northern Michigan since that report was made? If you can make your estimate on the same basis as Mr. Finlay did, I wish you would do so.

MR. COLTON: Well, just a moment. Will he state on what basis he is making it, because it may be an elaborate thing to assume all the details that Mr. Finlay made his report on.

By MR. REED:

Q. Very well, then, if you will take the depths as Mr. Finlay took them—use the same basis generally.

A. The ore that has been discovered since Mr. Finlay's report, some of it lies on the Gogebic Range just south of Wakefield, and the other large tonnage lies near Mastodon in the Crystal Falls district. There have been smaller tonnages discovered, but I have not heard the exact tonnage of them or what they estimate.

Q. You are unable, then, to give us any estimate?

A. I can give you an estimate on those two principal discoveries, 25,000,000 tons.

Q. That is what I wanted; just ignore for the present these smaller discoveries about which you are unable to give us an estimate. In those two principal discoveries you say there are about 25,000,000 tons?

A. Yes.

Q. What effect has that on the percentage of the Steel Corporation's ore in Michigan and Wisconsin?

A. It lowers it about four per cent.

Q. Taking into account those discoveries that have been made since the publication of Mr. Finlay's report, what is the present percentage of the Steel Corporation's ownership to all of the merchantable ores in the Gogebic, Menominee and Marquette ranges of Wisconsin and Michigan?

MR. COLTON: You understand that our objection to all the

testimony subsequent to October 26, 1911, applies to all of these witnesses?

MR. REED: That is understood, and the stenographer will make a note of it.

THE WITNESS: Approximately 22 per cent.

By MR. REED:

Q. That is, the present percentage is approximately 22?

A. Yes.

Q. I assume it was approximately 26, then, at the time of the publication of Finlay's report?

A. Approximately 26.

Q. Based on his figures?

A. Based on his published figures.

Q. To what depth have drillings showed that the veins in the Gogebic Range, the Menominee and the Marquette will probably go?

A. Drilling and the mining operations have shown approximately 3,000 feet at the present time.

Q. Has that depth actually been reached in operations?

A. I would not make a definite statement as to 3,000 feet, but it is that approximate depth.

Q. In these deepest workings, Mr. Merriam, how does the quality and the width of the ore compare with the quality and width in the higher levels of the same vein?

A. There is no appreciable change. In some instances I believe the records show better ore at depths than in the higher levels.

Q. Take it by and large, how do the averages of the deeper levels compare with those of the higher levels?

A. I should say they are about the same.

Q. If these deeper levels are included throughout these three ranges, would the aggregate tonnage of ores be changed from the aggregate shown in Finlay's report?

A. I should say not.

Q. The aggregate tonnages; I do not mean the percentages.

A. No; they would not.

Q. Has Mr. Finlay estimated the ore to these deepest levels throughout the ranges?

A. In his report—I do not know that I understand you just exactly. Has he estimated the ore at the deepest levels; is that the question?

Q. To these deepest levels. Of course, I understand he has estimated all the ore that is opened up in each particular mine, but has he assumed that the different veins will go to these great depths?

A. Yes, he has.

Q. Has he included the low-lying tonnages in his report?

A. He has.

Q. In your opinion, are the ores in those districts likely to extend below the depths to which he has gone?

A. I think they will.

Q. Will it be feasible to mine that ore?

A. It will.

Q. To what depth do you believe it will be feasible to mine ore in those ranges?

A. At least twice the depth of the deepest mine at the present time.

Q. That is how far?

A. Say 6,000 feet; probably deeper.

Q. What effect would it have upon the tonnages given in Finlay's report if the ores down to the 6,000-foot level were included?

A. It would increase them very materially.

Q. Mr. Merriam, in the past ten or fifteen years has there been any change in the minimum iron content of ores that were considered merchantable in the Lake Superior district?

A. Yes; there has.

Q. Has that change been upward or downward?

A. It has been downward.

Q. As the standard of merchantability is relaxed in that way, is there any change in the tonnage of ore which can be calculated in reserve?

A. There is.

Q. For each one per cent. that the minimum is reduced, is any appreciable quantity of ore added to the total reserves for the district?

A. Why, I should unhesitatingly answer yes; but to name any particular tonnage would be impossible.

Q. Suppose that that drop were to continue until a minimum of 45 per cent. in iron were to be the standard of availability, could you give us any idea of the quantity of ore that would have to be added, or the additional ore that would have to be taken into consideration in computing the reserves of the Lake Superior district?

A. I should say it would increase the reserves at least two billion tons.

Q. Two billion; two thousand million?

A. Two thousand million.

Q. Suppose, then, there were a further drop to, say, 35 per cent.; how much would the reserves be increased?

A. There would be an enormous increase in that case.

Q. Have you ever attempted to calculate it?

A. I have, roughly.

Q. What result do you get?

A. Some seventy billion tons in the Lake Superior district.

Q. There are a great many districts in the world in which 35 per cent. ore is considered available, are there not?

A. There are a number of districts in which it is used.

Q. Do you know what percentage is required to make ore available, say in the Luxembourg district?

MR. COLTON: Just a moment. I object to this line of questioning until it is developed as to the relation of coke and other facilities to make it material. It is entirely immaterial when the conditions in reference to fuel are not the same and are not shown to be the same.

By MR. REED:

Q. Will you answer the question, Mr. Merriam?

A. They are using an ore that is, approximately, 35 or 36 per cent. in the Luxembourg district.

Q. Where do these lower grade ores, say between 35 and 50 per cent. in iron, chiefly lie; in which part of the Lake Superior district?

A. A very large percentage of them occur in Michigan, on the older ranges.

Q. In the older ranges?

A. Yes.

Q. Have you attempted to calculate the percentage which the Steel Corporation owns or controls of those ores down to 35 per cent.?

A. Not in Michigan.

Q. Sir?

A. Not in Michigan, but for the entire Superior district.

Q. Not in Michigan, but you have for the entire district?

A. I have for the entire district, including the Mesabi.

Q. Including the Mesabi?

A. Yes.

Q. What percentage does it control of such ores throughout the whole Lake Superior district?

A. Not ten per cent.

Q. Mr. Merriam, do you know how much ore is shipped annually—is used annually by a concern like the Bethlehem Steel Company or the Cambria Steel Company?

A. Why, I understand they use about a million and a half tons.

MR. DICKINSON: Do you mean each or together?

THE WITNESS: Each.

By MR. REED:

Q. A million and a half tons each?

A. Yes, sir.

Q. If you were commissioned to obtain an ore reserve, say, for fifty years for a concern of that size, do you believe that you could obtain it in the Lake Superior district?

A. I do.

Q. Would it be extremely difficult to obtain it?

A. Not at all.

Q. How would you go about it?

A. Why, that tonnage can be obtained in the Lake Superior region to-day from developed tonnage, and can be purchased in the market; it is on the market for purchase.

Q. That is, the ore lands themselves are on the market?

A. The ore lands, for purchase or for lease.

Q. Well, it could be secured in one way or the other?

A. Yes.

Q. Would that entail taking over any of the Hill ores?

A. Not at all.

Q. Would it require you to take over any of the established ore merchant concerns?

A. No.

Q. How would you go about finding that ore? Say you wanted seventy-five to a hundred million tons?

A. Why, I know where it could be found now, practically.

Q. Well, where? If you are not betraying any confidences, I would like to have you tell us.

A. No. In the Menominee district; some in the Marquette; some from the Gogebic; from the Mesabi; from the Vermillion, and from the Cuyuna. Each one of those ranges could furnish ore.

Q. What is the present condition of the market for ore lands?

A. There is no excitement or no anxiety, so far as I know of, to obtain ore lands.

Q. Does the supply of land appear to be adequate for the demand?

A. It does.

Q. What in your opinion would be the effect on development work of any attempt to corner the best ore lands of the Lake Superior region?

A. It would stimulate development.

Q. In your opinion would it be possible to corner the supply of presently merchantable Lake Superior ores?

A. It would not.

Q. Why not, Mr. Merriam?

A. For two reasons; one, the manner in which they are held at present, and another on account of the immense—well, there are three reasons; another on account of the immense cost of acquiring it, and as soon as they began to be acquired, there would be other ores continuously brought in.

It would be one continuous process of buying up ores and ore lands.

Q. Have other companies than the United States Steel Corporation bought lands in the Lake Superior district within the last few years?

A. They have.

Q. Name a few of them, if you can.

A. I do not know. I cannot name them. I am not so familiar with that side of the question—the operating side; but I know that other ore companies have purchased lands, ore lands.

Q. Have all of the large steel companies followed the policy of securing their reserves far into the future?

A. Most of them have, I think.

Q. Are there some who have not?

A. One that I recollect, Jones & Laughlin, have not pursued that policy.

Q. What is the advantage of not buying up an ore reserve for the future, if there are any advantages about that course?

A. Well, you have not the large carrying charges which are involved in the buying of ore lands.

Q. Have Jones & Laughlin had any trouble getting ores, so far as you know?

A. Not as far as I know.

Q. How is the supply of ore—I do not mean ore lands, but the ore itself—mined ore—as compared with the demand?

A. Why, it is fully equal to the demand.

Q. Have these merchant ore concerns, like Hanna & Company, Pickands, Mather & Company, and the others that have been named, been able to sell all of the ore they could mine?

A. No; in my opinion they could mine very much more ore than they are selling.

Q. You know their mining operations, do you—are familiar with them?

A. In a general way I am familiar with them.

MR. COLTON: Mr. Reed, what date are you speaking of there?

MR. REED: I am speaking of the present.

By Mr. Reed:

Q. Has there been any different condition attained since 1901?

A. No.

Q. Has there ever been a time when it was not possible to go in and buy up ore reserves for a company of the size of which we were speaking?

A. No, there has never been a time to my knowledge.

Q. Since 1901 have you yourself known of properties that were available for purchase?

A. I do not know that I could mention any properties that were available for purchase at that time. My work has been more along the undeveloped mining properties. I know of lands that were offered since that time, ore has been discovered on them.

Q. From your knowledge of the geology of the district and of the development of ore properties, I would like to have your opinion on this situation: If you were given the ownership of a concern like the Bethlehem Steel Company, or Jones & Laughlin, or the Pennsylvania Steel Company, that was absolutely without any lands or ore reserves, would you be apprehensive of your ability to supply your furnaces with a supply of good ore?

Mr. Colton: We object to that on the ground that it is not specified as to the size of those companies, or that the witness knows the size of those companies; consequently his answer would be immaterial.

Mr. Reed: I will add to the question.

By Mr. Reed:

Q. (Continuing) And assume further that such a concern would use from 1,500,000 to 3,000,000 tons of ore a year.

A. I would have no apprehension whatever.

Q. Why not?

A. From my general knowledge of conditions in the Lake Superior District, and knowing the general situation for years past.

Q. Would you in such a case be able to compete with

companies that had bought their ore years ago at lower prices?

A. I think so.

Q. Why?

A. The prices of the ores have not increased materially, and when you figure the taxes and interest and carrying charges, I think that a company purchasing at the present day would not be at any disadvantage, or any material disadvantage.

Q. How much ore did the Lake Superior District produce say up to January 1, 1912?

A. The total production of the Lake Superior District?

Q. Yes.

A. That was 580,000,000 tons.

Q. After having produced that 580,000,000 tons, how do the known reserves of the Lake Superior District compare with the known reserves at any time in the past?

A. They were higher than at any time in the past.

Q. How are they at the present time?

A. They are the highest that have ever been known.

Q. In spite of those shipments?

A. In spite of those shipments.

Q. Have you ever been in Birmingham, Alabama?

A. Yes, I have.

Q. When were you there?

A. About the middle of November, 1907.

Q. Was that your first visit to Birmingham?

A. That was my first visit.

Q. How did you happen to go to Birmingham then?

A. I was ordered to go to Birmingham and make a report on the Tennessee Coal, Iron & Railroad Company.

Q. From whom did you get those instructions?

A. From Mr. Gayley, and also from Mr. Corey.

Q. Mr. Gayley and Mr. Corey?

A. Yes.

Q. Do you remember what they said to you?

MR. DICKINSON: We object to that as incompetent and irrelevant.

THE WITNESS: I only remember in a general way what was mentioned in Mr. Gayley's office.

By MR. REED:

Q. What were your instructions?

A. My instructions from Mr. Gayley were to go to the Birmingham district together with Mr. Catlett and make an examination of the Tennessee Company's holdings, and he also instructed, or advised me, that Mr. Corey wished to see me before I left.

Q. Did you go then to see Mr. Corey?

A. I did.

Q. What were his instructions?

A. His instructions were: "We want you to go to that district and see if we have bought a gold brick."

MR. DICKINSON: What time was that? I do not think you have shown that.

MR. REED: Yes, in the middle of November, 1907.

By MR. REED:

Q. Who went with you to Birmingham, or who joined with you in the examination?

A. Mr. Charles Catlett.

Q. Did you make a report on that district?

A. We did.

Q. Or on the Tennessee Company's holdings?

A. On the Tennessee Company's holdings.

(Here a paper was marked Defendants' Exhibit No. 100.)

By MR. REED:

Q. I show you Defendants' Exhibit 100 and ask you what that is?

A. That is a summary of the report on the Tennessee Company's iron holdings.

Q. When was that summary prepared?

A. It was prepared along in March or April or in the spring of 1906.

Q. Is that one of the original summaries?

A. It is one of the original summaries; that was prepared in my office.

Q. That is not a copy recently made for the purposes of this trial?

A. No, that is one of the originals.

Q. Have you been in the Alabama field since that time?

A. I have not.

Q. Did you at any time make up any statement of the proportion of the Tennessee Company's holdings to the ore reserves of the entire district?

A. I did not.

Q. Were you asked to make up any such statement at that time?

A. I was not.

Q. Were you asked to obtain any information as to the holdings of other companies down there than the Tennessee Company?

A. No, sir.

MR. DICKINSON: You have not offered this in evidence, have you?

MR. REED: No, I have not, Judge; have you finished looking it over?

MR. DICKINSON: Yes.

By MR. REED:

Q. I notice on this Exhibit 100 in the group of red ores that you have included a number of tracts of what are called "outlying lands." I wish you would tell us how those lands lie with relation to Morrow's Gap?

A. They lie entirely north of Morrow's Gap.

Q. Those are not in the district where the producing mines are located, are they?

A. No.

Q. Have you been in Brazil, Mr. Merriam?

A. I have.

Q. When were you there?

A. I have been there twice. I do not remember the exact date of the first visit. It was only a short one. The second time I was down there in 1909 and 1910.

Q. Did you examine the iron ores in that district that lies about 300 miles north of Rio?

A. Yes.

Q. What is the general name for that district?

A. The Minas Geraes is the general term used in referring to that district; the Minas Geraes iron district.

Q. The Itabira district that was spoken of yesterday is a subdivision of that?

A. Just a subdivision of it.

Q. What kind of an examination did you make of that Minas Geraes district in 1909 and 1910 as to thoroughness?

A. I spent several months; I should say three months on horseback, and covered quite a large portion of the district, made estimates of tonnage that could be seen of several deposits and examined and walked over and measured roughly a number of other deposits.

Q. Did you sample the ore?

A. I sampled a number of deposits.

Q. This district is about the same distance from the port of Victoria that it is from Rio, is it not?

A. Yes, sir.

Q. How many railroads are there from those two ports that either tap or approach the iron district?

A. There are three.

Q. What are their names?

A. The Central Railroad of Brazil, a government-owned road, the Leopoldina railway, a private road,——

Q. Not a government road?

A. It is not a government road; and the Victoria Diamantina road.

Q. The first two come from Rio towards the district, do they not?

A. Yes, sir.

Q. And the last one from Victoria?

A. From Victoria.

Q. Do you know whether any extensions of the Victoria and Diamantina road are planned?

A. Yes; they are planning to extend the Victoria and Diamantina into the northeastern portion of the iron district.

Q. As compared with the other iron districts that you have seen, Mr. Merriam, what can you say as to this Brazilian ore field?

A. I never have seen anything that would even compare with it in magnitude.

Q. How about the quality of its ores?

A. It is exceptionally good.

Q. Do you know of any better ore anywhere?

A. I know of none in any quantity as good.

Q. How did these ores run in iron, the best of them?

A. 69 per cent. and better; a number of ore assays ran 69 per cent. and better.

Q. How are they as to phosphorus?

A. They are low.

Q. Low in phosphorus?

A. Low in phosphorus. These high grade ores, I should say, would be .015 approximately.

Q. How are they in texture?

A. Very good; excellent, in fact.

Q. How do they compare with the Mesabi ores in texture?

A. They are much better.

Q. Taking into consideration only ore that runs 60 per cent. iron and over, what is your estimate of the tonnage in sight in that Brazilian district?

A. Sixty per cent?

Q. Sixty per cent. or better?

A. Why, I should say seven or eight billion tons of that grade.

Q. That is, seven or eight thousand million?

A. Seven or eight thousand million.

Q. How much of that would be this very high grade ore, running 68 and 69 per cent.?

A. About a quarter of it, I should say.

Q. To what depth below the outcrop do you go in making that estimate?

A. In making that estimate I should say that 1,200 feet below the outcrop would cover that big tonnage.

Q. What warrant have you for going that far in depth? To begin with, tell us what the nature of the deposit is.

A. It is a sedimentary deposit, and we are warranted in going to much greater depth than that on that character of a deposit.

Q. On what experience, on what illustrations, do you base that conclusion?

A. On the fact that I have never known or never heard of a sedimentary deposit that did not extend to great depths.

Q. The Lake Superior ores are not sedimentary, are they?

A. They are sedimentary in a sense.

Q. How about the Mesabi ores; are they sedimentary in that same way?

A. The iron formation itself is sedimentary. There is no secondary enrichment in the Brazilian ores as there is in the Mesabi District or in the Lake Superior District.

I would like to make one explanation: The seven or eight billion tons includes three or four billion tons of what is known as canga.

Q. What is canga?

A. It is broken-down and re-cemented material derived from the iron ore bodies or the iron ore beds.

Q. How does it run in iron?

A. It will average, from the samples that I took in Brazil, about 60 per cent. in iron.

Q. And is it an available iron ore? I mean, is there anything to interfere with its use in the furnace?

A. No; nothing whatever.

Q. Now, Mr. Merriam, how about the transportation and mining costs and the availability of this Brazilian ore in the United States? What can you tell us as to that?

A. I think the high-grade ores are available in the United States under present conditions.

MR. DICKINSON: I object to that question and answer because he has not shown that he is familiar with the cost of transportation or has had any experience as an expert in transportation.

By MR. REED:

Q. Have you studied the question of the availability of those ores in the United States?

A. I have, so far as has been in my power.

Q. How about the cost of mining in Brazil; is that high?

A. It is not. I should say fifty cents a ton was a reasonable price.

Q. What allowance did you make for the railroad haul from the ore fields to tidewater?

A. $1.25.

Q. What rate was suggested by the government railroad authorities for that haul?

A. Four milreis.

Mr. Dickinson: I except to that as incompetent and hearsay.

By Mr. Reed:

Q. You made an investigation of this when you were there, did you?

A. I did.

Q. How much does four milreis amount to in American money?

A. It varies, according to the exchange; but at the time I was there it amounted to about $1.20.

Q. Did you make inquiries to learn what it would cost to ship that ore from Rio or from Victoria to a North Atlantic port?

A. I did.

Q. What do you estimate the cost to be?

A. Two dollars a ton.

Q. Two dollars a ton?

A. Yes.

Q. Is that assuming that it is shipped in large quantities, with regular service?

A. Yes, that is, assuming it to be shipped in large quantities.

Q. What is the present quoted open rate for tramp steamer service of that kind from, say, Rio to Philadelphia?

A. I think thirteen shillings at present.

Q. About $2.60?

A. About that.

Q. Well, assume, Mr. Merriam, that shipping in large quantities you still could not get a better rate than the present open quoted rate by tramp steamers, and had to pay

$2.60 in freight on each ton of that ore, would it be available for use along the Atlantic coast of North America?

A. In my opinion it would.

Q. What would be its value at the blast furnace, say, in Bethlehem? I am talking now of 68 or 69 per cent. ore.

A. Well, I can answer that question by simply stating the figure that was given me for the value of an ore of that character in 1910. That figure was $7.65 a ton.

MR. DICKINSON: I except to that, as not showing the source of information and as hearsay and secondary evidence; not based upon any knowledge that he has shown as an expert.

By MR. REED:

Q. You have not made any investigations to determine what the present value of such an ore would be, have you?

A. I have not.

Q. Now, taking into consideration all of these elements which you have mentioned, also the suggested export tax of 25 cents a ton which, I believe, is not yet a fact, is it——?

A. It is not, as I understand it.

MR. DICKINSON: Did you say it is not a fact?

THE WITNESS: It is not, as I understand it.

By MR. REED:

Q. Was it a fact when you were in Brazil?

A. It was not at that time.

Q. And you have not since learned that the tax has been put on?

A. I have not.

Q. But assume that the tax is 25 cents, as suggested by our friend, Mr. Colton, yesterday——

MR. COLTON: (Interposing) Fifty I suggested. Mr. Leith suggested 25.

MR. REED: Did he?

MR. COLTON: Yes.

MR. REED: Then as suggested by Mr. Leith,—for what do you calculate that this ore could be laid down at Philadelphia per ton?

THE WITNESS: Per ton?

By Mr. Reed:

Q. Yes, or per unit, if you prefer?

A. About seven cents a unit; perhaps slightly above that.

Q. Seven cents a unit for 69 per cent. ore is $4.83, is it not?

Mr. Dickinson: 63, is it not?

The Witness: 63?

Mr. Reed: No, $4.83.

Mr. Dickinson: Yes.

By Mr. Reed:

Q. Would such an ore be salable at such a price at Philadelphia?

A. It would.

Q. Would it be salable at 8 cents a unit in any condition of the iron market that we have experienced, say, for fifteen years?

A. I think it would.

Q. Now, who owns——

Mr. Dickinson: (Interposing) I object to that question and answer, because it is not shown that he is familiar with the prices of iron during that time or with market conditions, or that he has had any experience in that line.

By Mr. Reed:

Q. Who owns the great bulk of these Brazilian deposits, Mr. Merriam?

A. There are a number of holdings down there. There is an American Company and there is an English company, and one of those has been organized and entered Brazil since my return from there. I can only state in this connection that at the time of my visit there, with the exception of the English company, these holdings were in private hands; the owners of the soil.

Q. Did you get any options yourself on these Brazilian ores or some of them?

A. I did.

Q. On about what tonnage did you take options?

A. I do not remember exactly now; several hundred million tons.

Q. And at what prices?

A. At prices ranging from three-quarters of a cent to one-tenth of a cent a ton, on ore that could be measured practically as well as you can ore in a stock pile.

Q. What quality of ore do you consider in making that statement?

A. A large percentage of that ore was of the highest quality.

Q. What was the lowest percentage that you considered?

A. The lowest percentage was one sample that analyzed practically 59 per cent. iron. That was the lowest sample I took in Brazil.

Q. That was the lowest sample you got in Brazil?

A. Yes.

Q. For whom did you take up these options?

A. I took them for the United States Steel Corporation.

Q. Did you make any recommendation for or against the purchase of these ores which you had optioned, by the Steel Corporation?

MR. DICKINSON: I object to that as incompetent.

THE WITNESS: I recommended their purchase.

By MR. REED:

Q. Strongly or otherwise?

A. Strongly.

Q. When was this?

A. In 1910.

Q. What action did the Steel Corporation take toward their purchase?

A. They were not purchased by the Steel Corporation.

Q. They decided not to purchase them?

A. Yes, they decided not to purchase them.

Q. Did the Steel Corporation make any effort to purchase them beyond your taking of the options?

A. I was notified within a few weeks after my report was presented that they would not exercise the options.

CROSS-EXAMINATION

By Mr. Dickinson:

Q. You say you went twice to Brazil?

A. Yes.

Q. When was your first visit there?

A. I do not remember. It was about a year, I think, prior to the last visit.

Q. And the last was in 1910?

A. The latter part of 1909 and the first part of 1910.

Q. On that first visit how long were you there?

A. Only about a week.

Q. Where did you go; did you go on these iron properties?

A. I did not go on the iron properties on the first visit.

Q. So you made no personal observation then of the properties themselves on that visit?

A. Not on that visit.

Q. You returned in 1909, the latter part?

A. Yes.

Q. How long were you there then?

A. I was away from this country for ten months. I did other work than the examination of the iron mines while there, but as I stated in my examination, I was on the iron properties or in the iron district making an examination for about three months.

Q. What territory in miles, length and breadth, speaking roughly, is embraced in the iron district that you visited?

A. About 120 miles in a northeasterly and southwesterly direction, and about 60 miles in the opposite direction.

Q. Is that a settled-up country or an unsettled country?

A. It is pretty well settled.

Q. Are there towns there?

A. Yes.

Q. Did you visit any of those towns?

A. I did.

Q. How many of them?

A. I do not know.

Q. A number of them?

A. A number of them.

Q. Did you go on the properties themselves?

A. I went on the properties themselves.

Q. How many of those properties that you went on, with a view of examination, were developed, and what was the extent of the development, and state who owned them at that time and what was the character of those developments.

A. There were no developments on any of those properties at that time, except such casual work as had been done in gold mining.

Q. That is looking at the outcrop?

A. Looking at the outcrop.

Q. There had no drill holes been put anywhere on that property?

A. No.

Q. And all the information as to the content of that area was based upon an examination of outcrops?

A. An examination of outcrops entirely.

Q. How many of those outcrops did you examine?

A. I can remember nineteen localities.

Q. And then did you examine various openings on those nineteen localities?

A. I examined the surface exposures.

Q. Were there any shafts driven down at all on any of those properties?

A. No, no shafts.

Q. Were there any drifts, and if so, how far did they extend into the openings?

A. There were a few short drifts.

Q. How far did they go into the earth on the outcrop?

A. I do not remember the exact number of feet of those that we were in, but they did not extend to a great distance.

Q. Well, about what distance?

A. I would estimate that the longest one was perhaps 300 feet.

Q. What would be the average, if there was anything like an average? They varied from 300 feet to what,—just a few feet?

A. To a few feet. So far as I remember, there were not more than half a dozen of those that I saw.

Q. Did they go in from the side of the earth, and were they tunnels or were they openings that went up to the surface?

A. They were tunnels.

Q. And you say one tunnel was about 300 feet?

A. Yes.

Q. What was the height of that tunnel? The 300 foot tunnel—I mean the headway.

A. Perhaps six and a half feet.

Q. What was the width of it?

A. About five feet.

Q. What was the character of deposit that you saw there, of iron ore?

A. They are sedimentary deposits.

Q. Was it in solid continuous formation or was it in pockets, and some more at one place than at another?

A. It was a solid continuous formation.

Q. All of the same density?

A. No, not all of the same density.

Q. The density varied?

A. The density varied.

Q. Did it vary in the different entries that you went into?

A. Yes. To a certain extent I should say it did.

Q. And in different parts of those entries?

A. Different parts of the entries.

Q. Now you say you went in all into nineteen?

A. Nineteen localities.

Q. How many openings?

A. I think I said before that I did not see over five or six openings.

Q. Then your examination of the iron ore in place was confined, was it not, to five or six openings?

A. No, sir.

Q. What else; what other opportunities did you have?

A. The surface exposures.

Q. You mean on top or on the side?

A. On top and on the side both.

Q. What kind of country was it, a flat country or a rolling country?

A. A hilly country.

Q. It was broken, was it?

A. Yes.

Q. Were there erosions?

A. Nothing except the water erosions.

Q. Did they go a considerable depth between the hills, were there valleys between them?

A. Yes; they went to considerable depths.

Q. How high up were these formations that you examined; were they in the valleys or were they on the hilly parts?

A. On the hills, largely.

Q. How near the top were they?

A. Some of them, a great many of them, were right at the tops of the hills.

Q. Were most of them at the top?

A. Yes; I should say the majority of them.

Q. Can you give any idea of the proportion, in a rough way, of how much was hilly and how much was valley? Have you made any estimate of that?

A. No, I have not.

Q. You have not made any estimate of that?

A. No.

Q. But if there were hills and eroded valleys between, and what you saw was near the top, then the deposit did not form a uniform deposit extending over the whole area of that country there?

A. It did not extend over the whole area of the country.

Q. It is interrupted by these valleys?

A. Interrupted by those valleys.

Q. Did you survey that country?

A. We surveyed it—well, it was a reconnaissance. Our measurements were rough measurements, just pacing.

Q. To what extent did you pace it?

A. In each instance we paced enough to get a rough approximation of the length and breadth of the exposure of iron ore.

Q. That is, in the particular locality which you then examined?

A. Yes.

Q. But how much of that entire iron bearing area that you considered in your estimate here did you pace or see paced?

A. What percentage of it?

Q. Yes.

A. That is difficult to answer, but to some percentage.

Q. It is a very large territory there, is it not?

A. A very large territory.

Q. As a matter of fact, your personal observation was confined to a very small part of that entire iron area?

A. Not of the entire iron area.

Q. I mean of the entire area that you have assumed as iron bearing?

A. It was confined, I should say, to the area of iron ore exposure. I think I saw fifty per cent. I rode over or walked over perhaps 50 per cent. of the known deposits.

Q. And the other fifty per cent. you do not know anything about of your own knowledge?

A. No, not of my own knowledge.

Q. This estimate that you have made, is that based upon the information you derived there by your observations made of the ore as you saw it exposed, and as you saw it in these drifts or entries, or is it on that and other information?

A. It was based on what I saw in riding and walking over the various iron deposits. I will say this, I started on the southwest side and took in the deposits on the west side of that area as far as the northeast part, at the peak of Cane then on the east side to Ouro Preto, and in that distance we were riding or walking a good percentage of the time on some class of iron ore.

Q. You went on two sides of it, then?

A. On two sides of it.

Q. And the balance you did not see at all?

A. I thought I had seen enough.

Q. You saw enough of what you did see, but you did not see anything of the territory lying back of that?

A. Not of the interior of that area.

Q. But you have estimated as to the whole of that area, have you not, in this estimate which you have given?

A. I have estimated as to the whole of the area.

Q. Do you base that estimate upon what you then saw, or upon what you then saw combined with information that others gave you at the time?

A. It is based largely on what I then saw.

Q. And that was confined to the proportion of the area as you have described it?

A. Fifty per cent. of the area.

Q. Do you mean to say that you went over 50 per cent. of all the area that you have estimated as containing iron, or that you went down two sides and saw the exposure on two sides of it merely?

A. What I mean to say is this: I went over 50 per cent., and more than 50 per cent., of the iron exposures, the known iron exposures in that area, by riding and walking across; I do not mean to say that we rode directly around it; we crossed back and forth, in going around it, and I think I am safe in saying that I saw personally over 50 per cent. of the iron exposures that are known there.

Q. You know what you saw, but you do not know how much there was of it that you did not see?

A. No.

Q. And when you say 50 per cent., you do not know how much there was outside of what you saw except from what others told you; is not that a fact?

A. I would like to have that question read.

Q. How do you know that was 50 per cent. and not 75 per cent., if you did not see the balance and did not know the extent of the balance?

A. Well, I am not positive that it was exactly 50 per cent.

Q. That is your idea on the subject?

A. That was my opinion.

Q. From what you saw, you think that was 50 per cent., but you do not know anything about what you did not see, nor the extent of it?

A. I do not know anything about what I did not see, except from hearsay.

Q. From hearsay. Your conclusion, then, is made up upon

your observation of what you think was 50 per cent. and what you heard as to the other probably being as much more?

A. No; I stated that the basis of my estimate was largely what I saw myself.

Q. Yes, but then you estimated not merely that, but you estimated the whole?

A. Well, it is fairly reasonable, when you know that there are additional iron occurrences in a district of that kind, to put in some tonnage for those.

Q. But, if you only went over what you understood from others to be half of it, you do not know whether that was half or whether it was three-fourths, do you?

A. I do not.

Q. Mr. Merriam, you spoke of quotations, open quotations, of tramp ships for bringing iron here, from the ports there to American ports. What do you understand a tramp ship to be?

A. A ship that is seeking cargoes in any place that it can get them.

Q. A ship that just happens in?

A. A ship that just happens in; doing a general carrying business.

Q. Do you understand they have any such thing as standing open quotations?

A. Did I say that it was a standing open quotation?

Q. You spoke of open quotations and particular quotations. You adopted that language and I wanted to know just what you meant by it.

A. I meant that there had been charters taken recently from the port of Rio to our Atlantic ports at 13 shillings.

Q. You did not mean to say, then, that there was any such thing as a regular market quotation to that effect?

A. No; I do not mean to say that.

Q. Do you know of your own knowledge, and, if so, how do you know it, that iron ore was brought from those ports to American ports at the price you have just named?

A. There has been no iron ore shipped from those ports.

Q. There has been none brought from there here at all?

A. No; that was not a quotation.

Q. Then, if you do not know of any quotation, and do not know of any iron ore being brought, do you know as a matter of fact that it could be brought, and that a ship would handle it at that price?

A. As I stated before, they were chartered at 13 shillings from Rio Janeiro to the Atlantic ports.

Q. Chartered for what?

A. Manganese.

Q. How about iron ore? Were they chartered to bring iron ore?

A. They have not been chartered to bring iron ore.

Q. Then you do not know of any price quoted or offered or actually used for transporting iron ore from that country to this?

MR. REED: Has he not told you that a couple of times already, Judge?

MR. DICKINSON: I do not know but what he has.

MR. REED: If you want him to keep on repeating it, I have no doubt he is perfectly willing to do so.

MR. DICKINSON: All right, then; just answer that.

THE WITNESS: There has been no iron ore exported from Brazil.

By MR. DICKINSON:

Q. Do you not know, Mr. Merriam, that a tramp ship, when it comes into port and is taking a cargo, having no regular rates, sometimes, to save dockage fees, will load up at almost any price? Is not that a fact?

A. Yes.

Q. What basis have you, then, derived from any knowledge of the cost of transportation, for making any statement in regard to what it will cost to bring iron ore from those Brazilian ports to North American ports?

A. From what has been done.

Q. With other things?

A. With material of substantially the same character.

Q. What has been done, that you know of of your own knowledge, and that somebody did not tell you?

A. Nothing that I know of of my own knowledge.

Q. Did you ship anything?

A. No, I did not.

Q. Did you see the way bill or bill of lading for any shipments?

A. Yes.

Q. Where from?

A. From Chile, on manganese.

Q. From Chile?

A. Yes.

Q. But I am talking about Brazil. Chile lies on the other side of the mountains, does it not?

MR. REED: Still further.

THE WITNESS: Yes, still further.

By MR. DICKINSON:

Q. Well, but I am talking now about Brazilian ports.

A. No.

Q. Do you know of any charge on any commodity similar to iron for carriage between Brazilian ports and North American ports—of an actual transaction, I mean, within the last two or three years—of your own knowledge?

A. Not to my own knowledge. Simply hearsay.

Q. Now, as to those railroads you speak of, have they carried any ore yet to the seaboard?

A. Not iron ore.

Q. I mean iron ore.

A. No.

Q. How long will it be at the present rate of development before it will be carried down?

A. Well, within a few years.

Q. Within a few years?

A. I should judge so.

Q. Mr. Merriam, you spoke of the quantity of ore that would be available if the market demand should come down so that 35 per cent. ore would be available. Now, how long in your judgment would it be before at the present rate of development of the iron trade as it has been going on in this country—before that period will arrive?

A. That they will use 35 per cent. ore?

Q. Yes, from the Lake Superior district.

A. Oh, it will be a long time—a long period.

Q. Well, what would you estimate it to be?

A. I doubt if any quantity of material of that kind will be used inside of two hundred years.

Q. Do you think it will make much difference to the iron industry of the country to-day or within the next few years as to the demand for 35 per cent. ore two hundred years from now?

A. No, sir; I do not know that it will.

Q. Mr. Merriam, what has been the basis of the steel industry in this country, so far as ore is concerned, for the last twelve years? Has it not been the Mesabi ores?

A. Yes, I should say it had, largely.

Q. Suppose within the last twelve years any one concern had had control and owned all of the Mesabi ores—I am not assuming that anyone has had, but I am just putting the hypothetical question—what chances, if any, would other makers of iron and steel in this country have had against such a concern which owned and controlled during that period all of the Mesabi ores?

A. Why, I think the older ranges and the developments that could have been carried on and would have been carried on on the older ranges would have furnished a supply of iron ore.

Q. In competition with the Mesabi, looking to the question of higher cost and to the question of the grades of ores and all the conditions which enter into the question of marketability?

A. I think so.

Q. What has been the output of the old range ores on the average for the last twelve years?

A. About ten million tons a year.

Q. About ten million tons a year?

A. Yes.

Q. And what has been the output of the Mesabi ores during that time?

MR. REED: You have it in evidence already, Judge.

THE WITNESS: I do not know the average during that time.

MR. DICKINSON: We have so much that I cannot remember it all.

By MR. DICKINSON:

Q. Well, has it not been from twenty to thirty million?

MR. REED: Wait a moment.

By MR. DICKINSON:

Q. Has it increased from twenty to thirty million?

MR. REED: You do not mind if I show the witness your own exhibit, do you, Judge?

MR. DICKINSON: Oh, no. I do not want to get any figures in here that are not correct.

MR. REED: What year do you want to consider?

MR. DICKINSON: Let us start in 1905.

By MR. DICKINSON:

Q. What was it from the Mesabi during that period—1905?

A. 1905?

MR. REED: Mr. Colton picks his years well.

THE WITNESS: 1905, twenty million.

By MR. DICKINSON:

Q. Twenty million?

A. Yes.

Q. Now, what was it from the older ranges during that year?

A. I presume about ten million.

Q. Was there an increase or decrease during 1910, as compared with 1905, in the Mesabi?

MR. REED: You had better ask him about 1904.

MR. DICKINSON: I will, if you wish me to do so.

By MR. DICKINSON:

Q. Take 1904. What was it in 1904 for the Mesabi?

A. Eleven and a half million.

Q. Eleven and a half million?

A. Yes.

Q. Now, what was it in 1910?

MR. REED: I do not find that on that page. Page 258? there.

THE WITNESS: Thirty million.

By MR. DICKINSON:

Q. Now, in 1912 what was it?

MR. COLTON: He has not that before him.

By MR. DICKINSON:

Q. Well, in 1910 it was thirty million, and the older range was ten million?

MR. REED: Oh, no. He did not say that.

MR. DICKINSON: Oh, I thought he did.

By MR. DICKINSON:

Q. What was the old range for 1910?

A. Approximately 17,000,000, I think it is.

MR. REED: You can get it by subtracting the Mesabi from the total.

By MR. DICKINSON:

Q. Is it not thirteen million?

A. About sixteen million, the old range shipments.

Q. How much?

A. Sixteen million, approximately.

MR. COLTON: Are you counting the Vermillion as an old range there?

THE WITNESS: Yes, I am counting it as an old range there. I am putting it in as contrasting the Mesabi with the other ranges.

By MR. DICKINSON:

Q. In 1910, what proportion did the United States Steel Corporation own of the merchantable ores in the Vermillion range—the then known and considered merchantable ores?

A. Well, practically all of it.

Q. Practically all of it?

A. Yes.

Q. Now, Mr. Merriam, I understand you to give it as your opinion that if some iron and steel concern should start up, of the size of the Bethlehem or the Cambria, using a million and a half tons, I believe it was assumed, of iron ore a year, that you could go into the Lake Superior regions and procure for such a concern an ore supply for 50 years. That is your statement, is it, in your judgment?

A. I think so, substantially; yes.

Q. At what prices?

A. Well, I can answer that at the ordinary market prices to-day.

Q. Well, tell me what they are. For instance, take Bessemer ore in the ground, purchasing outright the fee, of such quality as the best of the Bessemer ore in the Mesabi region; for what could that be bought?

A. I do not know. I cannot answer that question.

Q. Then you do not know at what you could procure this?

A. No. I do not know absolutely, but I could procure it.

Q. Take the other ores—the non-Bessemer ores—at what price could you procure those for such a concern?

A. I do not know absolutely.

Q. You attempted to say, did you not, Mr. Merriam, that if a concern of that kind started up and would go in and pay the price, they could get that much ore?

A. Yes, they could get that much. There is that much ore for sale.

Q. But you cannot say at what prices?

A. No, I cannot say definitely.

Q. Can you say at what royalties, if it were on a royalty basis, they could get it now?

A. I should say on royalties ranging from 25 to 50 or 55 cents.

Q. 25 to 50 or 55 cents?

A. Yes.

Q. Now, in what regions would that be?

A. In any of the districts.

Q. That is to say, in the Mesabi region—well, not the Vermillion—do you know of any there that could be gotten?

A. I do; that is, it could be purchased.

Q. Then you would include the Vermillion, would you?

A. Yes.

Q. How about the old ranges in Michigan and Crystal Falls and that section; would you include that in the 25 to 50 per cent.?

A. Yes, I include all those ranges.

Q. Now, you were asked hypothetically as to a concern starting up of that magnitude and with that degree of consumption. Suppose two such concerns wanted to start up, what would you say about that, about getting the ore?

A. I should say that they could get the ore, perhaps not go in and purchase the entire 50 years' supply, but they could get a supply that would start them in business, and they could take up additional tonnages from time to time.

Q. And you would consider that an entirely safe proposition, would you?

A. Yes.

Q. From the standpoint of an expert?

A. I would.

Q. That is to say, if they got enough to start them, they could safely inaugurate a scheme of that kind, relying upon future purchases?

A. I think they could safely.

Q. Two such concerns as that?

A. Yes, two.

Q. How about three?

A. I think three could do it; that is from my knowledge of what I believe will be developed in the future in the Lake Superior region.

Q. I am taking present conditions now; would you start a concern upon your knowledge of what might be developed there in the future?

A. They would use how many tons a year?

Q. That would be four million and a half.

MR. REED: You mean for each concern?

THE WITNESS: No, he means the total.

By MR. DICKINSON:

Q. Three of them would be four and a half million. Now,

assuming four and a half million, could you safely inaugurate three concerns that would consume together four and a half million tons a year, with the surety of getting a supply of iron ore at such prices and of such grades so they could compete fairly in the market with existing concerns?

A. Yes, I think so.

Q. Well, let us say four, then; that would be six million tons a year.

A. Yes, I think I am safe in saying four.

Q. From known developed ores, do you make that answer?

A. Yes; practically from known developed ores.

Q. Now, will you please state in detail where you would get for all of these concerns that should start up to-day a reserve of ore of such character and quality and so situated that they could compete in the market with other concerns where the extent of use would amount to six millions a year; in what region would you get it, with an average analysis such as would enable them to compete? I am referring both to phosphorus and iron content.

A. I would go up in the Cuyuna Range, and I would get some from the Vermillion, some from the Mesabi, some from the Iron River, and some from the Marquette.

MR. REED: Would you reject those Wakefield ores which you spoke of, on the Gogebic?

THE WITNESS: No; didn't I mention the Gogebic?

MR. REED: I do not remember that you did.

By MR. DICKINSON:

Q. Take the Cuyuna Range; how much ore was shipped from there last year?

A. 300,000 or 400,000 tons.

Q. Do you know what proportion of that three or four hundred thousand tons was produced by people who were not themselves engaged in the manufacture of iron?

A. No, I do not; I couldn't answer that.

Q. Do you know at what prices those lands in fee could be gotten?

A. I do not.

Q. Do you know at what royalties they could be got, and if so, just state those that you have in mind and who the owners are.

A. I am basing my opinion on the sworn evidence that I have heard in this case, regarding the ores on the Cuyuna range, and what I know from information that I have received in a general way, and my knowledge of the Lake Superior conditions.

Q. When you said on your direct examination that you thought one or two concerns using as much as one and a half million tons a year could start up, did you base that on the same source of information?

A. No, I did not.

Q. What answer did you base on the sworn testimony in this case?

A. The ores——

Q. (Interposing) No, I mean what answer. You have said some answer was based; was that an answer to my question?

A. An answer to your question.

Q. As to these six million tons?

A. Yes, sir.

Q. And you base your answer not upon your own knowledge, but on what you have heard other people say?

A. And published information of the tax commissions.

Q. Just tell me what of the sworn testimony in this case you relied on in giving that answer as to 6,000,000 tons, what answers and who gave them, and just what it is based on. I want to know just how much of that goes in as an ingredient in your answer?

A. Well, Mr. Crosby's testimony and Mr. Zapffe's testimony.

Q. Did either of them say that any concern could now acquire an ore reserve for 50 years with an annual consumption of 6,000,000 tons?

A. They did not.

MR. REED: I judge the record will show what they said. I object to this as not cross examination.

MR. DICKINSON: I think when a witness sits by and hears other testimony in the case and says he bases his conclusion on that testimony, I think it is pertinent for me to know just how much of his testimony is based on what they swore to.

MR. REED: Then why don't you ask him.

MR. DICKINSON: I have asked him.

MR. REED: Then put your question that way.

By MR. DICKINSON:

Q. I will put it that way. Will you be good enough to say just how much of your answer as to that 6,000,000 tons a year for 50 years was based upon testimony you heard in this case, and what that testimony was and who gave it, and just repeat the testimony that entered in as a basis of that answer.

A. I based part of my testimony on the testimony of the other two gentlemen, Mr. Crosby and Mr. Zapffe, only to the extent that it corroborated my opinion gathered from my knowledge of the geological conditions up there, that there was a large tonnage of ore developed and partially developed on the Cuyuna range.

Q. Well, now, what was the balance of your answer based on?

A. On my general information of the conditions on those ranges.

MR. REED: On which ranges, Mr. Merriam?

THE WITNESS: On the Lake Superior district as a whole.

By MR. DICKINSON:

Q. Of that answer as to 6,000,000 a year for 50 years, how much did you assign to the Cuyuna?

A. About two-thirds of it.

Q. What is the average iron content of the ores that have been mined in the Cuyuna range, and what is the average of phosphorus?

MR. REED: If you know, Mr. Merriam; we do not want hearsay.

THE WITNESS: I do not know. The only thing I could base that on would be printed statements.

By Mr. Dickinson:

Q. Can you state it at all, now?

Mr. Reed: I object to hearsay evidence of that. Why do you not ask somebody who is familiar with those things, Judge? You have had ample opportunity.

Mr. Dickinson: That is just what I am trying to show,—that he is not familiar with it.

By Mr. Dickinson:

Q. Do you know anything about the grade of ore over there, of your own knowledge?

A. No; nothing, as I said before, except published information.

Q. Can you state what that is?

A. I should say, as I remember it, it is a comparatively high phosphorous ore and would run somewhere around 55, 56 or 57 per cent. iron. I do not remember.

Q. That is as nearly as you can answer that?

A. That is as nearly as I can answer that.

Q. How much of this ore to be acquired for the purposes stated did you assign to the Vermillion?

A. A very small percentage to that.

Q. What percentage?

A. I doubt if there is over 500,000 tons up there.

Q. How much to the Mesabi?

A. Somewhere in the neighborhood of thirty per cent. or thirty-five per cent.

Mr. Reed: Thirty-five per cent. of what?

Mr. Dickinson: Of the whole six million, I understood.

Mr. Reed: Of the six millions?

By Mr. Dickinson:

Q. That is what you meant, is it not?

A. No. You asked me, unless I am mistaken, what percentage I would place on the Cuyuna, and I said two-thirds.

Q. Two-thirds of the six million, that is?

A. Yes.

Q. Then I asked you how much per cent. you would place on the Vermillion and you said 500,000 tons. Did you mean a year?

A. No; 500,000 tons. That is very small.

Q. That would be 50,000 tons, then, would it not, for one year, assuming a supply for fifty years, out of the six million?

MR. REED: That is 10,000 tons a year for fifty years, Judge.

THE WITNESS: That is very small.

By MR. DICKINSON:

Q. Then the Mesabi, of the 6,000,000 you said thirty to thirty-five per cent.; did you mean of the 6,000,000, per annum?

A. No; I mean that of the 6,000,000 fifteen per cent., perhaps, was on the Mesabi.

(Whereupon an adjournment was taken until to-morrow, Friday, October 3, 1913, at 10:30 o'clock a. m.)

EIGHTY-EIGHTH DAY.

EMPIRE BUILDING,
71 BROADWAY, NEW YORK CITY,

FRIDAY, OCTOBER 3, 1913.

Before Special Examiner JOHN ARTHUR BROWN.

Present on behalf of the United States, MR. DICKINSON and MR. COLTON.

Present on behalf of the Defendants, MR. LINDABURY, MR. SEVERANCE, MR. BOLLING and MR. REED; also, on behalf of the Great Northern Iron Ore Interests, MR. CHESTER W. CUTHELL.

WILLIAM N. MERRIAM,

the witness under examination at the taking of the adjournment, resumed the stand.

CROSS-EXAMINATION (Continued)

By MR. DICKINSON:

Q. Mr. Merriam, in figuring the reductions of percentage held by the United States Steel Corporation you referred to two principal discoveries of about twenty-five millions of tons, and then this question was put to you: (Record, page 11910.)

"Q. Taking into account those discoveries that have been made since the publication of Mr. Finlay's report, what is the present percentage of the Steel Corporation's ownership to all of the merchantable ores in the Gogebic, Menominee and Marquette Ranges of Wisconsin and Michigan?"

Did you include, in estimating that percentage, the Baraboo District?

A. No.

Q. Has the Steel Corporation any holdings in the Baraboo District?

A. They have some holdings there.

Q. How many acres?

A. I don't know the acreage.

Q. To what extent did their holdings in the Baraboo District go?

A. Very small.

Q. That is in the State of Wisconsin, is it?

A. That is in the State of Wisconsin.

Q. You excluded that in making your estimate?

A. My estimates were made on the old ranges of Michigan.

Q. The question put to you, however, which I have just read, embraces the Menominee and Marquette Ranges of Wisconsin and Michigan, and your answer was "Approximately 22 per cent." You say you did not include Wisconsin?

A. I included the Gogebic Range, part of which is in Wisconsin.

Q. Just part of the Gogebic?

A. Yes.

Q. But you did not estimate the other holdings of the United States Steel Corporation in Wisconsin?

A. Not in Wisconsin. They are not in the Lake Superior District.

Q. In getting at that percentage, as of what date was that estimate made? I do not mean when you made it, but for what year?

A. It was based on the Finlay estimate of 1911 for the Tax Commission.

MR. REED: Which one—the first percentage or the second percentage; the 26 or the 22?

THE WITNESS: The 26.

By MR. DICKINSON:

Q. I am referring to the 22.

A. They are both based on that.

Q. They are both based on the Finlay estimates?

A. They are both based on the Finlay estimates.

Q. Did you have any other factors entering into it except the Finlay estimate, when you answered as to the 22 per cent.?

A. I have the additional tonnage that has been proven since the Finlay estimates were made.

Q. What do you mean by "proven"?

A. Proven by diamond drilling, the ordinary method of proving up ore in the Lake Superior district.

Q. From what sources did you derive your knowledge as to that proof? Did you make drillings yourself?

A. No.

Q. These were not on lands that you were operating upon, or in respect to which you had any employment, were they?

A. No.

Q. Then your information as to that is all secondary, is it not, derived from others?

A. It is derived from others.

MR. DICKINSON: We object to so much of the answer of the witness as is based upon information derived as to drillings where the evidence upon which he relied and the data are not produced.

By MR. DICKINSON:

Q. Did Mr. Finlay's report give anything for the State of Wisconsin, that portion of the Baraboo district in the State of Wisconsin?

A. No.

Q. In estimating this percentage, this 22 per cent, held by the Steel Corporation, what grade of ores did you include in what you contemplated and in respect to which you estimated?

A. The ordinary merchantable grade of ore in those districts.

Q. How low did you go in analysis in iron content?

A. I took Finlay's figures which include the merchantable grades of ore in the district. I did not make up those figures, and I do not know exactly what grades of ore he took.

Q. These additional discoveries: What grades did you take there in making up this estimate? What did you include? Down how low in iron content did you go?

A. They include ores, in one case that ran above 60 per cent, and in the other case they are somewhat below 60 per

cent.; around 57, if I remember my information correctly.

Q. "In one case"? What do you mean by "in one case"? You mean in one instance, one mine?

A. In one of the mines.

Q. And in the other you say it ran what?

A. If I remember my information correctly, about 57 per cent.

Q. You only had within your consideration, then, the grades of two mines?

A. That is all.

Q. Were there any other mines in that district embraced within this discovery of twenty-five millions of additional ore?

A. There were.

Q. And you did not consider them at all—I mean the grade? You did not know the grade of them?

A. I know the grades, yes, the average grade of the ores in those districts.

Q. But I understood you to say, Mr. Merriam, in getting at this percentage, and in looking to the new discoveries, you had in mind particularly two cases: One where the grade was about 61 per cent. of iron content, and the other somewhat lower than that—you mentioned the amount. What other, except those two instances, did you have knowledge of in estimating this twenty-five million, and just state what the grades were, and what the mines were, and where they were located. I want to know just the bases of that theoretical estimate of yours.

A. Those two properties cover the twenty-five million tons.

Q. The two properties cover the whole twenty-five million tons?

A. Yes.

Q. How many analyses; that is to say, how many entries or how many openings were embraced in this estimate upon which you proceeded?

Mr. Reed: Just a moment; is that question quite clear? Do you mean openings or analyses or entries?

Mr. Dickinson: Analyses of how many openings.

By Mr. Dickinson:

Q. (Continuing) I take it that they had been making explorations?

A. They had been making explorations.

Q. And they either sunk shafts, or whatever method they had of getting to where the ore was in place, did they not?

A. It was drilling.

Q. Well, now, of those whole explorations or discovery of that area embracing twenty-five million tons of newly discovered ore, how many entries or how many shafts did you have analyses of that you looked to and considered?

A. I had no analyses whatever. I have taken, as I mentioned before, I have taken the statements of the people doing this exploration. They have analyses of a great many drill holes, I do not know exactly how many.

Q. You do not know of your own knowledge anything about that?

A. I know in a general way. I have seen on one of the properties the locations of some of the drill holes on that property, and I know that they were located there. I think the information came to me through an assistant of mine.

Q. How many of those drill holes did you yourself personally see?

A. I have not seen very many.

Q. About how many?

A. Perhaps half a dozen.

Q. With the exception of those half dozen coming within your personal observation, all your information as to the discoveries of this twenty-five million tons is based upon what other people told you, is it not?

A. Yes.

Q. Tell me what people own those two properties which cover these developments which you say contain twenty-five million tons of newly discovered ore.

A. M. A. Hanna & Company is one of them, and the Judson Mining Company, I believe that is the correct name of it, is the other.

Q. Those two own all of them?

A. The Judson have recently leased a portion of their property to Pickands, Mather & Company.

Q. Do Pickands, Mather & Company operate in that district under the name of the Cleveland Cliffs Company?

A. No, sir.

Q. Are they connected with it, the Cleveland Cliffs?

A. Not so far as I know.

Q. You spoke of Mr. Finlay's report and of his published figures. Did you refer to his report for the year 1911 made to the Tax Commission of the State of Michigan?

A. Yes.

Q. Now, in estimating this percentage of 22 per cent., what tonnage did you assign to the Corporation in the State of Michigan and that part of the Gogebic Range lying in Wisconsin?

A. In round numbers, 50,000,000 tons.

Q. How does that correspond with the amount given in Mr. Finlay's report?

A. It is practically the same. I believe within about a million tons or so.

Q. And you made no allowance, then, for what might be revealed by new discoveries or explorations upon any of the properties in Michigan or Wisconsin by the United States Steel Corporation, in your estimate?

A. None whatever.

MR. REED: Did you make any allowance for what might be revealed on other people's property?

THE WITNESS: No, sir.

By MR. DICKINSON:

Q. What developments have the Steel Corporation made within the last three years in their Michigan mines?

A. Just the ordinary mining developments, the ordinary keeping ahead of their mining.

Q. Just in the operation of the openings already made?

A. Yes.

Q. Have they operated those mines to their full capacity during the last three years constantly?

A. No, I think not. I think they could put out more ore if they were called upon to do it.

Q. What iron mines in this country do you know of your own knowledge where ore is being taken out at a depth of 3,000 feet?

A. None.

Q. What do you know that are being operated and where ore is being taken out in this country at a depth of 2,500 feet?

A. Yes, there is one.

Q. Where is that?

A. On the Gogebic range.

Q. To whom does it belong?

A. The Newport Mining Company, I believe, is the name of it.

Q. Your professional life has been mainly on the geological side, has it not?

A. Yes.

Q. Not on the operating side?

A. Not on the operating side.

Q. Have you ever had anything to do with either the operation of iron mines or the transportation of iron ore, and if so, to what extent?

A. I have had no direct connection with the operating end of the mining industry.

Q. Do you know whether or not there is a constant increase in ratio of the cost of mining as the depth proceeds, all other things being equal?

A. Yes, a slight increase I should say.

Q. Do you know what that is?

A. It would depend upon the conditions in a mine.

Q. Have you ever made any estimates of that?

A. I have not.

Q. But there is a recognized increase, is there not? There is a broad and recognized principle that the greater the depth the greater the cost?

A. Yes.

Q. In every character of mining is not that so?

A. Yes.

Q. What mines do you know of your own knowledge out-

side of this country where iron ore is raised from a depth of 6,000 feet?

A. I do not know of any; there are none that I know of.

Q. Do you know what the cost of that would be and how it would raise the relative cost, in what progression?

A. No, I cannot make a definite statement of that.

Q. What is the temperature at 6,000 feet?

A. That depends on certain conditions, the character of the rock which you are mining in.

Q. Well, have you ever had any experience in mining at a depth of 6,000 feet?

A. No.

Q. No personal experience?

A. They are mining at a depth of 5,000 feet in the Lake Superior region.

Q. I am asking as to your personal experience.

A. No, not of my personal experience.

Q. Are those iron mines?

A. No.

Q. Copper mines, are they?

A. Copper mines.

Q. Now, please name all the mines that you personally have knowledge of in this country that are raising iron from a depth of as much as 2,000 feet, and state where they are.

A. Well, the Newport mine and the Champion mine. The Newport mine on the Gogebic range and the Champion mine on the Marquette range.

Q. Are those all you can name?

A. I think there are others; there are a number of others that I know of close to that figure, but not having the exact figures in my mind I do not want to go on record as to those other mines.

Q. Are there not comparatively few that you know of where they are raising ore from a depth of 2,000 feet?

A. Yes, where they are raising from a depth of 2,000 feet. As I said, I would not want to mention but the two that I have already mentioned.

Q. And do you know the cost to those mines of doing that?

A. I do not know the cost; no, sir.

Q. What information and knowledge have you that would enable you to answer as to whether or not it is feasible in the Lake Superior District to mine ore at a depth of 6,000 feet and at such a price as would make it commercially desirable to do so?

A. My general knowledge of the mining conditions is that which I have gathered in connection with my work in those districts.

Q. As a geologist or as an operator?

A. Why, as a geologist.

Q. But that, as I understand you, is not based upon experience in the cost of operation?

A. No, I have had no actual connection with operation.

Q. And no actual knowledge of the cost of operation?

A. No, not firsthand.

Q. And you could not state the cost of raising a ton of ore 2,000 feet in any particular mine?

A. No, I cannot state it.

Q. And what relation that would bear, for instance, to the cost of taking ore out in the Mesabi, in the manner which is used there—the relative cost?

A. The relative cost on the Mesabi is small.

Q. Small as compared with the others?

A. Yes.

Q. Well, your information, then, as to the feasibility of mining ore in that region to a depth of 6,000 feet is not based upon any actual knowledge of cost or of what has been done anywhere in raising ore to that extent, is it?

A. Does that include only iron ore?

Q. Yes, I mean iron ore.

A. No.

MR. REED: Why do you limit it to iron ore, Judge?

MR. DICKINSON: Because we are talking about iron ore.

MR. COLTON: Copper ore is very much more expensive.

MR. REED: A ton of iron ore does not weigh any more than a ton of any other ore.

MR. DICKINSON: But we are talking about iron ore here. You can go into that, if you choose.

By Mr. Dickinson:

Q. Have you any knowledge upon which you could give any reliable answer as to the feasibility of mining iron ore in the Lake Superior ranges at a depth greater than 6,000 feet?

A. No, I have not.

Q. Have you made any estimate, Mr. Merriam, of how long, under present conditions of mining iron ore and the development of the iron and steel industry in this country, it will be before ore will probably be taken out in that region to a depth of 6,000 feet?

A. I should say, judging from the rate they have gained depths in the present mines, that ore might be taken out from a depth of 6,000 feet within thirty years.

Q. What information have you as to the existence of ore there at a depth of 6,000 feet or beyond 3,000 feet?

A. Nothing; but the geological conditions favor that answer, that there is ore there.

Q. Is it not a fact that from time to time a great many geological theories based upon data in existence are exploded, and it turns out that they are entirely wrong, even though made in good faith and in the light of the highest scientific attainments at that period?

A. Oh, yes.

Q. I understood you to say, Mr. Merriam, in your estimate as to the ability to procure six millions of tons of merchantable ore in the Lake Superior district annually for fifty years, that you assigned 45,000,000 tons of the entire amount, or 15 per cent. annually, to the Mesabi region; is that correct?

A. Yes, I think that was my answer to your question.

Q. I so understood it. Now, state in what localities are properties in the Mesabi region where you could get this ore reserve now of forty-five millions of tons, which you had in mind when you made that answer.

A. There is one property owned by Mr. Bennett; I do not remember his initials.

Q. Of the Longyear-Bennett Company?

A. I do not know whether it is the same Mr. Bennett or not.

Q. That is one property?

A. That is one property.

Q. Now, where is that situated?

A. Near Embarras Lake.

Q. Is that part of the Hill property?

A. No, I think not.

Q. Now, how far is that situated from present railroad transportation?

A. Why, there is railroad transportation right at it.

Q. Right at it?

A. Yes.

Q. What road?

A. The Duluth & Iron Range.

Q. Is that a Bessemer or non-Bessemer ore?

A. I do not know the analysis or grades in that property.

Q. You cannot give the grade or iron content of that ore?

A. No. I have taken that property and the tonnage from the Minnesota Tax Commission's report.

Q. Is that washable or non-washable ore?

A. That is non-washable ore.

Q. What is the grade of phosphorus?

A. I do not know.

Q. Do you know, of your own knowledge, that that property is held on the market for sale?

A. I assume it is. It is not tied up with any furnace company, so far as I know.

Q. But that is mere assumption on your part?

A. I have not asked the owner of the property whether it is for sale.

Q. Then you cannot say that you know that that property could be acquired?

A. No.

Q. What tonnage do you assign to that?

A. 17,000,000.

Q. Have you been on that property?

A. I have been on the grounds a number of times.

Q. Did you ever, yourself, as a scientist, make that esti-

mate of 17,000,000, or are you taking that from someone else?

A. I am taking that from someone else.

MR. REED: Will you say who, please?

THE WITNESS: I answered that question, I think, a few moments ago.

By MR. DICKINSON:

Q. The Minnesota Tax Commission, I think you said?

A. Yes; the Minnesota Tax Commission.

Q. Do you know anything about the cost of mining there, the depth at which the ore lies, or what the overburden is?

A. Only from hearsay.

Q. Do you know how that ore, taken out and prepared for market, would compare with respect to iron content and phosphorus with the best ores of the United States Steel Corporation in the Mesabi region?

A. No; I do not.

Q. Do you know how it would compare with the average grades of merchantable ore in the Mesabi region?

A. Only from hearsay.

Q. That is 17,000,000. What else did you have in mind in the Mesabi region?

A. The Pine Land Company. I think that is the name.

Q. Where is that situated?

A. I cannot tell where their holdings are.

Q. Do you know whether they are on the market for sale or could be procured, or are held——

A. They are in the same condition as the other.

Q. That is to say, your knowledge is of the same character?

A. Yes.

Q. What is the iron content?

A. I do not know that.

Q. And the phosphorus?

A. I do not know.

Q. And the tonnage?

A. The Tax Commission's estimate is 6,000,000.

Q. What else did you have in mind there?

A. There are some twenty or twenty-five independent companies on the range.

Q. You say "independent companies." Do you know who the stockholders of those companies are, of your own knowledge.

A. No.

Q. Do you know who controls them?

A. No.

Q. You do not know what secret ownership there may be as to them?

A. I do not know.

Q. To those twenty-five companies, how much do you assign?

A. They are given 6,000,000 tons by the Minnesota Tax Commission.

Q. 6,000,000 tons. Do you know whether those properties are on the market for sale, or could be procured, or whether they are held so that they could not be bought? Do you know anything about that?

A. I assume they are on the market in the same way as the other independent holdings there. That is all I know about it.

Q. That is all you know?

A. Yes.

Q. Do you know the grades of that ore and the percentage of phosphorus?

A. They are the general Mesabi ore grades. That is all I know about it.

Q. What do you mean by the "general Mesabi grade"? About what per cent.?

A. Well, around 58 per cent.; 57 or 58 per cent.

Q. Is your information on this subject gotten from the Minnesota Tax report?

A. Is it gotten from the Minnesota tax report?

Q. Yes. You referred to that a while ago as to the 17 and 6; and then as to this six million of the twenty-five companies; where do you get that information?

A. From the same sources.

Q. Does not the Minnesota tax report include all grades from 49 per cent. up of iron content as merchantable ore?

A. I do not know what they do base their——

Q. And you do not know what these several properties are; what the percentage is?

A. Except through conversation; through hearsay.

Q. And you could not give, of your own knowledge, or any examination of official data, the iron content of any of these properties?

A. I have not examined any of those properties.

Q. What other properties did you have in contemplation when you spoke of this 45,000,000?

A. The other ores from the Mesabi range could be picked up through purchase from parties having merchant ore to sell. The Hill lands contain somewhere in the neighborhood of 250,000,000 also.

Q. In estimating this 45,000,000, then, a part of it was of the Hill lands, was it?

A. A small portion.

Q. A small portion of it; and a part of it was from these bodies that you say could be picked up? When you say they could be picked up, do you know, Mr. Merriam, personally, have you any accurate knowledge about being able to pick them up? If so, I would just like to know what you do know about it.

A. I have never entered into any negotiation with the parties owning the land, so I cannot say definitely.

Q. Then you cannot say that any of this 45,000,000 is on the market now for sale, or the price of it?

A. Not definitely.

MR. REED: What is the common understanding as to that, Mr. Merriam?

THE WITNESS: That it is for sale.

By MR. DICKINSON:

Q. Now you spoke of 58 per cent. iron content; do you know that any of those properties run as high as 58 per cent.?

A. I know only through published reports.

Q. What reports?

A. Well, the record of analyses for season shipments, that are given by the Iron Trade Review.

Q. State in respect to any one of these that you have mentioned what such report gives the iron analysis to have been at any time?

A. I have not those figures in my mind. I have looked them over, and that is a general statement from my memory of the figures published.

Q. But you have not the figures in mind?

A. I have not the figures in mind.

Q. Have you any figure in mind that you remember as representing the iron ore content of any of those properties, and if so, which one?

A. No; it has not been my practice to attempt to remember those small details.

Q. Can you state that any one of those properties would not average as low as 53 per cent.?

A. Not any one of them, no.

Q. You were asked this question, at page 11919 of the typewritten testimony:

"Q. What in your opinion would be the effect on development work of any attempt to corner the best ore lands of the Lake Superior region?"

And you answered: "It would stimulate development."

Now, what did you comprehend there in your answer, taken in connection with that question, within the term "best ore lands"?

A. I do not quite catch your question.

(The question was repeated by the stenographer.)

THE WITNESS: The lands that lie on the known iron formation or within close proximity to it.

By MR. DICKINSON:

Q. When you answered the question in respect of best ore lands, did you have only in mind the question of location, or did you also have in mind the question of percentage of iron content and phosphorus?

A. I had in mind the question of location.

Q. Is that all you had in mind?

A. Yes.

Q. You were asked, on page 11921 of the typewritten testimony:

"Q. What is the advantage of not buying up an ore reserve for the future, if there are any advantages about that course?" and you answered:

"A. Well, you have not the large carrying charges which are involved in the buying of ore lands."

And you were also asked in regard to ore reserves and the starting of new enterprises, and you answered that in your judgment it would be economically safe to acquire a certain amount of property and launch such new enterprises, and that from your knowledge of those regions and the development of ore, they could rely for their reserves upon getting ore or purchasing ore from time to time. Is that substantially a correct statement of what you said?

A. I think it is.

Q. Then you do not consider it necessary to have a large ore reserve?

A. I think it is good policy to have a certain ore reserve ahead.

Q. But you do not consider it essential? What is your answer to that?

A. I think that an ore reserve should be to a certain extent great enough to warrant a certain investment in the plants.

Q. When you spoke of these new concerns that might be launched there, using say 6,000,000 tons a year, what percentage of that ought to be in ownership, and how far safely, from your knowledge of the developments that are going on and the increase of the reserves as you have described, could such a concern safely rely upon buying from mine owners in the steel and iron making business, or acquiring lands from time to time?

A. I think a concern of that size, if they had a reserve for ten or twelve years, could go ahead in their operations and acquire properties to meet their requirements.

Q. As I understand it you mean by that that a concern that would consume annually 6,000,000 tons for 50 years could be safely launched, from a financial and competitive point of view, if it started out by buying an amount of ore that would run it for ten years, and then trust to picking up from time

to time or purchasing from operators ore to continue the supply throughout fifty years; is that correct or not?

A. That is correct.

Q. What is the maximum of annual consumption of a concern of that sort that could be safely established in that region, in your judgment, based upon the ore in that Lake Superior region?

A. I think there are reserves in that region to-day not tied up with operating companies that amount to over 600,000,000 tons.

Q. Did you include the Hill ore in that?

A. I did.

Q. How many tons did you assign to the Hill ore?

A. About 250,000,000; I do not know the exact figures.

Q. So, outside of the Hill ore, there are about 350,000,000 tons of reserve ore in that region?

A. I should say all of that.

Q. Now you say "not tied up with companies"; what do you mean by "not tied up with companies"?

A. Not in the hands, so far as I know, of operating furnace companies.

Q. So far as is publicly known, or generally known?

A. Generally known.

Q. You are not speaking intimately of any secret holdings or control?

A. No, sir.

MR. REED: As to the Steel Corporation, you know what companies the Steel Corporation controls, do you not?

THE WITNESS: Yes.

By MR. DICKINSON:

Q. You mean to say that you know all of the interests the Steel Corporation may have through subsidiary companies in that region?

A. Well, no, I cannot name them, but I have seen their holdings there. I could not go ahead and name all of them. There are a great number of them.

Q. You have seen their avowed holdings, known to belong to them; you do not mean to claim to know what in-

terest they may have in holdings that are not known generally to belong to them?

A. No, I have not had access to all papers of the Steel Corporation.

Q. Now, how much of that, leaving out the Hill ore, do you assign to the Cuyuna range? You said 600,000,000 including the Hill?

A. Yes, at least 600,000,000.

Q. Now, how much of that 600,000,000 did you assign to the Cuyuna range?

A. You can assign 300,000,000 tons easily, and over.

Q. Is that based upon the testimony of others that you have heard in this case?

A. Not entirely.

Q. Partly?

A. The only thing in the testimony of others that I have heard in this case has been to substantiate information I had received from other parties in regard to the holdings on the Cuyuna range.

Q. To what extent have you personally made explorations on the Cuyuna range?

A. I have made no explorations on the Cuyuna range.

Q. You have made no drill holes there yourself?

A. No.

Q. Have you been on the Cuyuna Range?

A. I have.

Q. How much time did you spend on it?

A. Not very much time.

Q. When were you last there?

A. I have not been there for several years.

Q. How long since?

A. I cannot state exactly; I do not remember the last time I was out there.

Q. Well, have you been there within three years?

A. No, I think not.

Q. Have you been there within four years?

A. I cannot answer that question definitely. I think I was there about four years ago.

Q. Well, four years ago, Mr. Merriam, the developments there were very limited, were they not?

A. I will answer that question in this way: Four years ago you could see as much on the Cuyuna Range, with the exception of the mines that have been opened, as you can today.

Q. You say you could see as much. As much of what?

A. As much of the ore.

Q. Is the ore exposed on the surface?

A. No, sir.

Q. Well, how far does it lie below the surface?

A. Personally I do not know. They stripped—this is hearsay—they have stripped and are going to strip some of the properties on the Cuyuna Range, so the ore must lie close to the surface.

Q. Well, four years ago how much of it did you see at that time stripped?

A. There was nothing stripped at that time.

Q. Four years ago, then, could you see any ore there?

A. No. I made the statement previously that you could see nothing more at present than you could four years ago, except the mining operations.

Q. At that time you could not see anything on the surface?

A. The Cuyuna Range was absolutely covered with drift.

Q. And there had been very few openings?

A. There had been a great many drill holes.

Q. Well, how many drill holes did you personally see?

A. I do not know. I cannot say; I did not see very many, because I only visited one property.

Q. Do you know what the analysis of those was? Can you now state the figures?

A. No, I cannot.

Q. Mr. Merriam, when you were asked about the possibility of starting up one or two concerns using as much as a million and a half tons of ore a year, and you expressed the opinion that you could acquire that now, I also understood you to say—and if I am wrong you can correct me—that it could have been done at any time in the past—from the forma-

tion of the Steel Corporation. Is that what you meant to say?

A. Yes, I think they could have acquired that at any time.

Q. When I ask you about this 6,000,000 tons that you thought could be acquired, what would your answer be to that, whether or not that could be acquired at any time since the formation of the corporation?

MR. REED: You mean 6,000,000 tons a year, Judge?

MR. DICKINSON: Yes, 6,000,000 tons a year.

MR. REED: 6,000,000 tons a year for fifty years?

MR. DICKINSON: Yes.

THE WITNESS: I think it could.

By MR. DICKINSON:

Q. From developed properties? I mean, then known to be developed?

A. Perhaps not known to be developed—known at that time. Perhaps not from developed properties at that time, but they could have obtained enough ore from developed properties to have started them well in their operations, and they could have gone ahead the same as other companies have done, picking up ore lands and ores as they were developed by other parties.

Q. Now, take 1901; am I correct in understanding you to say that as of that time from developed properties you do not know that as much as 6,000,000 tons a year could have been acquired?

MR. REED: Well, Judge, that is putting the question in a totally different way.

MR. DICKINSON: I want to put it in the right way now. I want to be perfectly fair. If you will just tell me in any way it is wrong I will be very happy to correct it.

MR. REED: That is equivalent to asking the witness whether mines could have been bought which had an output of 6,000,000 tons a year, without regard to the length of the reserve. If that is what you mean, of course the question is all right.

MR. DICKINSON: Well, I do not mean to ask him that. What I mean to ask is whether or not at that time, in 1901, you

know that concerns starting up could have gotten properties which were known to contain merchantable ore, which properties would have yielded 6,000,000 tons a year, if opened up, and if so, what those properties were.

THE WITNESS: I will answer by saying that at that time I could have pointed out lands partially developed, and lands which have since been developed, which would have yielded the tonnage required.

By MR. DICKINSON:

Q. You say "partially developed and which have since been developed."

A. And others that have since been developed.

Q. Of those that have since been developed, was their character known then?

A. Their location was such that it was almost absolutely certain from developments around them that ore would be found on them.

Q. Was it then known or considered to be known as commercially available ore?

A. I am speaking of available commercial ore.

Q. But known then?

A. It was not known then, because the properties had not been drilled.

Q. Of what grade are you speaking now?

A. I am speaking of the average grade of ores of the Lake Superior districts.

Q. What was the grade then of merchantable ore, in 1901?

A. The average grade in 1901 or about that time, was about three per cent. higher than at present, if I remember correctly, on the Mesabi; practically the same as it is now on the Vermillion.

Q. Well, what grade would that be on the Mesabi?

A. Around 61.

Q. And on the Vermillion, what?

A. On the Vermillion the grade is higher.

Q. Do you mean to say, Mr. Merriam, that in 1901 you knew of your own knowledge of then developed and known merchantable ore to the extent of 300,000,000 tons that could

have been acquired, which were then on the market, and not owned and controlled by operating concerns?

A. No, I did not make that statement.

Mr. Reed: That is not what he said, Judge.

By Mr. Dickinson:

Q. Well, what do you mean to say?

A. I mean that on the different ranges there were ore lands which could have been secured, and which at that time were known to be favorably located, which would have yielded the tonnage required.

Q. Of the analysis of 61 per cent. on the Mesabi?

A. Of the average analysis of Mesabi ores at the present time.

Q. At the present time?

A. At the present time.

Q. But how about the commercial Mesabi ores as of that time—61 per cent.?

A. Well, I think the ores below 61 per cent. were commercially available at that time.

Q. How far below?

A. I do not remember the details of the ores sold at that time, the analysis of them.

Q. What is it now on the Mesabi, the available commercial ore?

A. It is about 58 per cent.

Q. And it would have been 61 at that time, would it not?

A. I believe the grade at that time, ten years ago, was about—between two and three per cent. higher, as I remember it.

Q. After the organization of the United States Steel Corporation, can you state properties that at that time, in the year 1901, could have been acquired, which would have contained, this known commercial ore on the Mesabi region of 61 per cent., and if so, to what extent of tonnage, and what were the properties?

A. There were a number of properties. I cannot tell them by name, but there were a number of properties that have

come in on the western end of the range; for instance, the Walker lands and the Hill lands.

Q. Were they then known to contain what afterwards it was ascertained they did contain? I mean in 1901.

A. They were not known to contain it. As I stated before, they were favorably located. I stated that lands favorably located could have been secured, and they have since yielded the tonnage.

Q. Have they developed 61 per cent. ore?

A. No, sir, not 61 per cent. ore; the average grade of the Mesabi ore. They have developed some 61 per cent. ore, I have no doubt.

Q. In leases that were entered into in 1901, what royalty was paid on Mesabi ore running 61 per cent., and a Bessemer ore?

A. I am not familiar with the leasing or the royalties of those ores. I have not had connection with that end of the business, and I can only say through hearsay.

Q. What prices were such ores then worth in the ground? Are you familiar with that?

A. I do not know what they would be worth in the ground at that time.

Q. Then, when you speak of acquiring ores throughout any of this period for competition with other concerns, you do not regard the question of price, because you have no knowledge on that subject; is that correct?

A. I would like to answer that question not yes or no.

Q. Just answer it with any explanations you want to give, Mr. Merriam.

A. There are a great many other companies which have been acquiring ore lands continually since that time, and I assume that they paid no more than the ordinary ruling price.

Q. But you do not know about that?

A. I do not know about it.

Q. Do you know whether the royalties rose from 1901 to 1907?

A. I cannot answer that question. As I said before, I have not a definite knowledge of those royalties, and I cannot answer it except through hearsay.

Q. Your answer would be the same, as to the prices of ore in the ground, as to whether or not that rose or fell from 1901 to 1907?

A. Yes; I do not know what a fair value would be to place on the ores.

Q. Mr. Merriam, from known commercial available ores, could you have duplicated, in quantity and quality, in the Lake Superior region, the ores owned by the United States Steel Corporation?

A. At that time?

Q. In 1901?

A. No, sir.

Q. Could you have done it in 1902?

A. No, sir.

Q. Do they not own the best quality of ores in the Mesabi and Vermillion ranges, and have they not, since 1901, in large quantities?

A. No. In the Vermillion region, yes, because they own practically all the ores in the Vermillion region. It is a small amount. But on the Mesabi, so far as my general knowledge of the case goes, I think the independents own perhaps the same percentage as the Steel Corporation of the good ore.

Q. Do you know the percentage of iron content and phosphorus which the ores owned by the Corporation on the Mesabi show to-day, or have shown for the several years since 1901?

A. No; I do not remember the figures.

Q. What is the amount of good ore, known commercial ore, in the Mesabi region?

A. About one billion four hundred million, I think.

Q. How much ore in the Mesabi region analyzing 61 and 58 of iron and .039 of phosphorus is owned by independent companies?

A. I do not know. Those are figures that I never had anything to do with; I never had anything to do with making up those estimates, and I do not know the figures. I cannot remember them if I ever knew them.

Q. Can you give any figures as to the independent companies?

A. No; I cannot give any figures.

Q. Then these general estimates that you make are not based upon accurate knowledge?

A. Of tonnage?

Q. Yes.

A. The tonnage is based on the tax commission tonnages.

Q. Now, about grade; how about grade? Do you have any knowledge of the grades of the several holdings of the Corporation there and the independents?

A. I have had nothing to do with that matter personally, in regard to any of the Steel Corporation holdings, or any of the independents.

Q. So you do not consider the question of grade or phosphorus; you only speak of the tonnage?

A. I speak of the tonnage.

Q. You are not testifying, as I understand, as to the grade of ore owned by independents in the Mesabi? You have no knowledge of that?

A. No, I am not testifying as to the grade of ore.

Q. You spoke of the increasing reserves in the Lake Superior district, as developments have gone on, mining operations. Is that general; does it apply generally over the district?

A. Yes.

Q. Then the reserve of the Corporation is larger now than it was in 1901?

A. I think it is; I do not remember the exact figures for 1901.

Q. Now, Mr. Merriam, is not that increase of reserve partly due to the fact that a lower percentage now is taken into consideration than was taken into consideration in 1901; a lower per cent. of iron? In other words, in estimating as of 1901 the available commercial ore, did they not stop at a percentage which was higher than they stopped at in estimating the available commercial ore as of the present time? Have not the demands of the market brought in a lower grade, and has not that tended to increase this percentage?

A. Yes, the grades have fallen.

Q. To what extent has that operated? Could you say?

A. It is pretty hard to answer that question.

Q. In the lowering of the percentage of iron content, each per cent. very largely increases the volume?

A. It increases very rapidly as you get to decidedly lower grades; it is an increased ratio.

Q. You were asked at page 11924 of the typewritten testimony a question to which you answered:

"A. The prices of the ores have not increased materially, and when you figure the taxes and interest and carrying charges, I think that a company purchasing at the present day would not be at any disadvantage, or any material disadvantage."

Now, from what time did you refer when you spoke of not increasing materially?

A. What increasing materially?

Q. Probably I had better go back. Just look at the book there.

A. (Referring to record) I think the prices have not increased materially for a number of years.

Q. Do you mean ore in the ground or royalties, or both?

A. I mean both. You can buy ore lands or ore in the ground or lease at a royalty at not materially higher prices in most instances.

Q. What is the highest royalty you knew of being paid prior to 1907 in the Lake Superior region?

A. I do not know the highest price.

Q. Do you know what the prevailing rates of royalties were for any year from 1901 to 1907?

A. No; I am answering that question from conclusions I have drawn from information I have obtained during my work in the Lake Superior region. I cannot make any definite answers to those questions.

Q. Do you know what royalty was paid by the Corporation under the Hill lease?

A. I have heard the royalty, but I cannot repeat it now.

Q. Do you know any royalty that was paid up in that region as high as that before that time?

A. No, sir.

Q. You spoke, Mr. Merriam, of the ore that could be

brought from Brazil to this country and you gave an estimate that you said you thought would be the cost of landing it at Atlantic ports, and you expressed the opinion that at such prices it could compete with other ores in this country. Can you give the price now of ores from any region in this country at Atlantic ports for the year 1912?

A. No.

Q. For 1911?

A. No.

Q. What figure did you have in mind when you made a comparison, or when you considered the question of possible competition? What figure did you have in mind as to the cost of putting United States ore at ports where it could compete with this Brazilian ore?

A. I figured out as closely as I could several years ago the cost of putting the Lake Superior ore into competition with Brazilian ore, and I figured at that time that they would meet on about equal terms at about the vicinity of Harrisburg, or slightly inland from the Atlantic seaboard.

Q. You figured out what you understood to be the cost that experience had demonstrated up to that time, so far as American ores were concerned?

A. Yes.

Q. And that was the basis of making the comparison, so far as American ores are concerned?

A. Yes.

Q. And then you put against that what might be the price of Brazilian ores at a time when that ore might come into this market in the future, did you?

A. I put against that the price that I thought Brazilian ores would come into this country at, at any time.

Q. But they are not coming now?

A. They are not coming now.

Q. And that period is indefinite in the future to a considerable extent?

A. Somewhat indefinite.

Q. And in making that comparison you took the present cost, or the cost at that time of American ore as a basis of comparison?

A. Yes.

Q. And projected that as to what the conditions or competition might be whenever that Brazilian ore should come; is that correct?

A. I think it is; yes, I think that is right.

MR. REED: In other words you gave the Brazilian ores the worst of it in your comparison?

MR. DICKINSON: I do not catch that.

MR. REED: In other words, he is figuring the present cost of American ores instead of any possible increased cost.

MR. DICKINSON: Or any reductions?

MR. SEVERANCE: Are you hoping for cheaper American ores, Judge?

MR. DICKINSON: I am not hoping anything about it; I simply want to show the basis of this comparison and see what it may be worth. I am not commenting on it at all; I simply want to get the analysis of it.

THE WITNESS: I will answer that question in this way, by saying that if the Brazilian ores at the time I made my estimate were developed ready for shipment, at that time they could have been placed in this market in competition with the others, the Lake Superior ores.

By MR. DICKINSON:

Q. Will you not amend that further by saying—provided the conditions in this country, as to putting ore on the market, will be substantially the same as they were when you made the estimate?

MR. REED: They were the same at that time as they were when he made the estimate.

THE WITNESS: Yes, I have no means of knowing what the conditions will be in the future at any one time; I cannot look ahead through the future.

By MR. DICKINSON:

Q. You are not posing as a prophet on that?

A. No, sir, I am not.

Q. Now, when you made the calculation of the cost of the

American ore, did you take the cost of the Steel Corporation's Mesabi ore as a basis?

A. I took the open market price; the quoted price of the Lake Superior ores.

Q. That price included a profit, did it not?

A. Why, I assume so.

Q. Yes; and the cost to the operator might have been much less, might it not?

A. To what ores do you refer, Judge?

Q. Well, I mean to say that when you took the market price of American ores, that included the cost and also the profit of the dealer?

A. Yes, I assume it did.

Q. So an element of profit was involved in that aspect of the proposition, was it not?

A. Yes.

MR. REED: Were you including similar profits in your Brazilian computation, Mr. Merriam?

THE WITNESS: Yes, sir; there is a profit figured in every individual instance.

MR. DICKINSON: I am very much obliged for that suggestion.

By MR. DICKINSON:

Q. Now, how much profit did you allow out of that American price? How much did you allow as profit?

A. As I understand you, you want to know what I figured the cost—the actual cost of hauling those Brazilian ores?

Q. Oh, no; I am not talking about Brazilian ores. I am talking about American ores. How much of that market price that you took did you consider as profit?

A. Oh, I do not know; I did not figure that.

Q. So you do not know how much of that was profit and how much was cost?

A. No.

Q. You just took the market price?

A. Yes, I just took the market price.

Q. When you went to Brazil and took options for the United States Steel Corporation on ore lands there, did those

options embrace the lands on which the entries were which you yourself personally went into?

A. No; there were no entries on any of the properties that I optioned.

Q. That you optioned?

A. No.

Q. To what extent did you go over the properties that you optioned?

A. That is a rather difficult question to answer. I examined them pretty carefully.

Q. You did not go in under the surface at all, did you?

A. No.

Q. What opportunities did you have there for examining the property and estimating? I want to get at that.

A. Well that is what I would like to explain.

Q. Yes; I would be very glad to have you do so.

A. The conditions in Brazil are, first, that there has been no glacial action in that country and there is no glacial drift covering the deposits, as there is in the Lake Superior district. It would be very similar, although the Brazilian ores would be much better exposed, if the Mesabi Range had all of the surface taken from it and all of those bodies of ore exposed. In Brazil the surface contour is somewhat mountainous. The iron ores being harder, as a general thing, than the other rocks, have been left during the water erosion period. In this manner these ores can be seen and can be measured up practically the same as you can a stock pile, in enormous tonnages. There is no necessity for driving drifts or drilling, any more than there would be to drive drifts and drill into a stock pile. Now, I will give you some specific instances of the occurrence. Near Congonhas there is a body of ore that I paced across. It was standing vertically, the layers. The ores are sedimentary ores, and the deposit—the layers were standing vertically. I paced at right angles across those layers for a distance of 2,000 feet. Along the strike—I do not know how many thousand feet it extended along the strike, but I sampled across, taking a piece every so far in my pacing. The result of that, if I remember correctly, was between 66 and 67 per cent. in iron. The phos-

phorus I do not remember. We will go a little farther along to another deposit.

As to the deposit near—well, it is on what is known as the Fazenda Esperanza. In this instance, the ores lie in a mountain peak. That peak had been a landmark to us for thirty miles before we reached it. In examining the peak we were on and around that place for two or three days, and over it several times. In that examination we did not find a single piece of ore that analyzed less than 69 per cent.

We sampled at right angles to the strike, or across the layers, for a continuous distance of between 600 and 700 feet. The vertical distance from the top of the peak to where we saw the same kind of ore below was in the neighborhood of 600 feet. There are several other instances that I can mention where the conditions are about the same.

Now, as to the last instance, I traveled over this deposit, but did not examine it carefully. I have since seen the results of careful examination and mapping, and from the figures in those results I have calculated the tonnage on that one property. The iron ore covers an area of nine square miles.

Q. You are speaking now of land on which you took options?

A. No, this is not one on which we took options.

It is known to be at least 50 feet thick. They can see, by ravines cutting through it, that it is at least 50 feet thick. It is probably very much thicker. I will give you my reasons for believing so, shortly.

If you will take these figures, with a fair factor for cubic feet per ton——

Q. You mean a factor of safety?

A. No; a factor of the number of cubic feet to the ton of ore which in this instance is about ten, you will find that on that one deposit alone between one-sixth and one-seventh of the entire tonnage that I estimated is in sight or is developed.

As I said before, those deposits are sedimentary deposits. They stand at various angles. In the case of sedimentary deposits, for instance, like the Clinton ores, which are thin, comparatively, we know absolutely from drill work and min-

ing developments, that they extend for several thousand feet along the dip. With these immensely heavier sedimentary deposits we are certainly able to say that they extend for at least a thousand feet along the dip, which would account for very much more ore than I have estimated on the things that I actually saw.

Q. Mr. Merriam, that is an interesting statement you have made, but it does not seem to me to be responsive to my question. I am asking you solely about the ores on which you took an option. How much of this that you have just described, that you saw and paced off, was included in what you took options on?

A. The first two.

Q. How many have you spoken of in this description you have given us? You say the first two. How many others were there included in this observation that you made?

A. In my observations all through——

Q. That you have just referred to in this answer?

A. In my description just now I have referred to but three localities.

Q. Three localities?

A. Yes.

Q. Two of those were embraced within the options that you took?

A. Yes.

Q. And one was not?

A. One was not.

Q. Is there no timber in that country?

A. A portion of the country is timbered, and a part of it is not. The eastern portion of the iron district is more heavily timbered than the western.

Q. Is there a portion of this iron country that you estimated timbered?

A. The iron ores on the surface do not yield themselves to the growth of timber.

Q. That is not answering my question. The question is: In this estimate of the billions of tons that you gave, do you include any of the iron lands that are covered with timber or have timber on them?

A. They have timber in the vicinity, and on some, occasionally, where some soil has been allowed to collect, there is timber.

Q. Some of those lands which you have included in your estimate are timber lands?

MR. REED: Is not that the question he has just answered, Judge?

MR. DICKINSON: If it is, I suppose there is no objection to his answering it the way it is put.

(By request, the question was repeated as follows:)

"Q. Some of those lands which you have included in your estimate are timber lands?"

THE WITNESS: There is some small growth on it. I do not know what you mean by timbered lands, exactly.

By MR. DICKINSON:

Q. Has any of it an overburden of soil?

A. No, there is no overburden of soil.

Q. You mean the iron is exposed to the very top?

A. The iron is exposed to the very top.

Q. Is this a continuous formation, or are there breaks?

A. So far as we know at present there are breaks.

Q. And what you saw was lying in different bodies, and you went from one body to another, and there were breaks between them, were there?

A. There were breaks between, yes.

Q. Did you survey that?

A. I did not survey all of it.

Q. Did you survey any of it yourself?

A. Just what do you mean by "survey"?

Q. I mean, did you take the area of it, through mathematical calculation and measurement?

A. Yes; on those that are included in the options.

Q. Yes; but how much of the lands that you included in making your estimate as to the entire tonnage did you yourself survey?

A. Oh, when you call it "survey"——

Q. I used that in a technical sense.

A. No, I have not surveyed it with instruments.

Q. You spoke of some maps that you have seen since you left, did you not?

A. Yes.

Q. You did not make those maps?

A. I did not make them, no.

Q. And you had nothing to do with making them?

A. No.

Q. And the information that you base upon that is derived entirely from examinations that were made by others?

A. It is.

MR. REED: He did not say he based his estimate on that, Judge.

MR. DICKINSON: I think he said yes to my question.

MR. SEVERANCE: I do not think he understood your question, Judge.

MR. DICKINSON: I want to have him understand it. I will ask to have my question and the answer of the witness repeated.

(The question and answer referred to were read by the stenographer as follows:)

"Q. And the information which you base upon that is derived entirely from examinations that were made by others?

"A. It is."

By MR. DICKINSON:

Q. Is that correct or not? If it is not, explain it, Mr. Merriam. If you have said anything you did not intend to say, just explain it.

A. I only rode across that and know that there is iron ore there; that is all as to that particular deposit that I know.

Q. What particular deposit do you mean, now?

A. It is this deposit to which I referred as having seen the map of; I do not remember the name of the deposit.

Q. So your estimate of the tonnage of that is based on your riding over it and derived from information you got from this map?

MR. SEVERANCE: Is that the same tract he was testifying about in detail a few minutes ago? I know you want to have it clear, Judge.

MR. DICKINSON: I really do not know whether it is or not.

MR. SEVERANCE: I wish you would ask him that.

MR. DICKINSON: I want to get my present question answered first. I will ask to have it read.

(The stenographer repeated the pending question as follows:)

"Q. So your estimate of the tonnage of that is based on your riding over it and derived from information you got from this map?"

THE WITNESS: Yes.

By MR. DICKINSON:

Q. Mr. Severance wanted to know what particular tract that was.

MR. SEVERANCE: What I want to know is whether that is the tract the witness was describing in detail a few moments ago in his long statement; whether that was covered by that map.

THE WITNESS: It was the last description of that statement.

By MR. DICKINSON:

Q. And that was the piece that you did not take an option on, was it?

A. We did not take an option on it.

Q. Coming back to what you did take an option on, how much time did you spend on the property, examining it?

A. Altogether I was only on the property a portion of one day.

Q. How many acres did it embrace, the property on which you took an option?

A. I do not know just the acreage of those properties.

Q. Was it some miles in extent each way, or did it lie about in different spots, different tracts? Was it in a solid body?

A. No.

Q. It was in different tracts?

A. It was not in a solid body.

Q. It was in different tracts?

A. It was in several different tracts.

Q. How many of those tracts on which you took an option did you personally visit?

A. All of them.

Q. And all within one day?

A. No.

Q. How many days did you devote to examining the various tracts upon which you took an option?

A. I should say altogether I was there six or seven days.

Q. What measurements did you take of the land upon which you took options?

A. I measured by pacing the surface areas of exposed ores on those, and got as much information as I could regarding the depth of them, and from those factors estimated the tonnage. After you have done that, you have seen just as much as if you had remained on those properties a month.

Q. And you did not go all over those properties? Did you see every part of it?

A. Yes, I saw every part of it.

Q. Upon which you took the option?

A. Upon which I took the option. I would say that I did not see every foot of it, but I went over it thoroughly.

Q. How far is that ore upon which you took options from the Atlantic Coast?

A. Approximately 300 miles.

Q. How far is it from any railroad?

A. One tract was about six miles, and the other about three.

Q. How near is the nearest part of that ore region in Brazil to which you have referred to the coast? I mean to the seaboard, the Atlantic Coast.

A. I think it is practically the same distance from Victoria that it is from Rio, which would make it approximately 300 miles.

Q. Do you know what in the year 1895, approximately, the production was in gross tons in the Lake Superior region?

A. I do not remember those figures.

Q. Do you know approximately what the production was of the Mesabi Range at that time?

MR. REED: Do you want the witness to see that exhibit already in, your exhibit, proving those figures?

MR. DICKINSON: No, I do not want him to see it; I am asking him what he knows.

By Mr. Dickinson:

Q. How about the year 1900? Do you know the total production in the Lake Superior region?

A. No, it is impossible for me to keep those figures in my head.

Q. Can you give it approximately?

A. No, sir.

Q. And of the Mesabi, can you give it approximately?

A. No.

Q. Is it not a fact that the increase in Minnesota from 1901 down to the present time has been in a larger ratio constantly than the increase in Michigan, of output?

A. Yes.

Q. Do you know what per cent. approximately was produced in 1910 by the Mesabi region?

A. Percentage of what?

Q. Lake Superior ore.

A. I cannot say definitely but I think the ratio was——

Q. (Interposing) Wasn't it about 66 per cent.?

A. I think about 14,000,000 to 15,000,000 as against 30,000,000 or 32,000,000.

Mr. Reed: What is the use of proving statistics by recollection?

By Mr. Dickinson:

Q. You mean fourteen to fifteen million for the Michigan ores?

Mr. Reed: I object to this as not cross-examination.

The Witness: I cannot keep these figures in my head.

By Mr. Dickinson:

Q. I was just trying to get what you meant. You said fourteen or fifteen millions. You meant Michigan ores?

A. I meant Michigan ores.

Q. As against about thirty-two million for the Mesabi?

A. Thirty to thirty-two million. That is a guess on my part from my general information.

Q. Is it your opinion that the Michigan ores, looking to quality, the percentage of iron content and the percentage of

phosphorus, and the manner of mining, can be put upon the market as cheaply as Mesabi ores?

A. No.

RE-DIRECT EXAMINATION

By Mr. Reed:

Q. Is it your opinion—this seems to be a matter of opinion—that when they get to the market they are worth more than the Mesabi ores?

A. It is.

(Whereupon a recess was taken until two o'clock p. m.)

AFTER RECESS.

WILLIAM N. MERRIAM,

the witness under examination at the taking of recess, resumed the stand.

REDIRECT EXAMINATION (Continued)

By Mr. Reed:

Q. In your cross examination this morning, Mr. Merriam, you described the way in which these Brazilian ores outcrop at the surface. Now, I want you to confine yourself absolutely to those ores in Brazil which you yourself saw and examined—those ores over which you walked and rode, and from your own examination tell us what tonnage you estimated down to this thousand foot level which you took in making the other estimates; that is to say, I want you to omit from consideration any estimate of ores which you did not see yourself and which you may have learned about by hearsay.

A. Fully 75 per cent. of the tonnage I testified to in the direct examination.

Q. Is what? I mean, what about the 75 per cent.? Is that what you saw or what you did not see?

A. No; that is what I estimated from what I saw.

Q. The remaining 25 per cent. then was based on hearsay evidence of other geologists and engineers, was it?

A. Yes.

Q. Do you know enough about furnace practice to tell us whether or not that Brazilian ore is a desirable ore for furnace use?

A. Why, yes; it is a very desirable ore.

Q. You did tell us the iron content, but I do not know that you told the phosphorus content of this high grade ore. Whether you did or not I wish you would tell us now.

A. As I remember my assays, it would average around .015.

Q. Some of it any better than that?

A. Yes, there was some better.

Q. What is the lowest phosphorus analysis which you remember?

A. I think it was about .01.

Q. .01?

A. Yes.

Q. Now, in considering the marketability of those ores, the cost of bringing them to North Atlantic ports of the United States, I understand you to say that you do not know of any actual shipments of iron ore from Brazil to North American ports.

A. I do not know of any.

Q. But I did understand you to say also that you knew of some shipments of manganese. Do you know of any shipments of manganese from Rio?

A. I know that manganese has been shipped from Rio. I do not know of any specific shipments.

Q. Do you know the rate at which it has been shipped?

A. Ten shillings.

Q. To what port?

A. I think to both European and American ports.

Q. Now, as to these manganese shipments of which you actually saw the bills of lading yourself, where were they from?

Mr. Dickinson: Well, I do not think he has said he ever saw any, has he?

Mr. Reed: I understood him to say he had.

THE WITNESS: Yes.

MR. REED: In answer to one of Judge Dickinson's questions.

MR. DICKINSON: Very well.

THE WITNESS: I saw this in Valparaiso, Chile.

By MR. REED:

Q. What that a shipment of manganese ore?

A. Manganese ore.

Q. Where was it shipped from and where to?

A. It was shipped from the port of Carrizal.

Q. Which is in Chile, is it?

A. In Chile, to one of the European ports; I have forgotten now which one.

Q. Now, how does manganese ore compare in bulk and in ease of shipment, ease of loading and the general cost of transportation, with iron ore?

A. I should say it would be practically the same.

Q. Does it run about the same in its ratio of bulk to weight?

A. Yes, about the same.

Q. How do the rates in other places for the shipment of manganese compare with the rates for the shipment of iron ore, if you know?

A. I do not know any places where manganese and iron ore are shipped from the same port.

Q. Is not that so in Cuba?

A. No. Well, yes it is, on the south shore ores.

Q. How do the rates for iron ore and for manganese ore—manganiferous ore—compare there?

A. I do not know the rates for manganese ore from the port of Santiago.

Q. Which is the more valuable product?

A. The manganese ore.

Q. The insurance is higher, I suppose, on manganese than it is on iron ore?

A. Presumably so.

Q. How does the distance from Rio to, say, Philadelphia, compare with the distance from Carrizal, Chile, to any European port?

A. It is practically twice the distance from Carrizal, Chile, to either the east Atlantic ports or European ports that it is from Rio.

Q. What was the rate of freight on this manganese ore from Chile to the European port, as shown in this manifest or bill of lading that you saw?

A. Ten shillings.

Q. How long since was that?

A. That was in 1907 that I saw that.

Q. Can you tell us how the rates of freight now charged for ocean shipments compare with those charged in 1907?

A. Why, only that for the past year or two they have been speaking of higher freight rates on the ocean.

Q. They have been speaking of them?

A. Yes.

Q. You do not know of your own knowledge?

A. No, I do not know of my own knowledge.

Q. In other respects are these trips comparable; that is, from Chile to Europe and from Rio to Philadelphia? The boats travel on the same kind of ocean, do they?

A. Yes.

Q. Mr. Merriam, in discussing the sources from which a supply of reserve ore for one of these hypothetical steel or iron concerns might be obtained you spoke at some length about deposits of ore which were owned or held for investment by private individuals; did you consider also the possibility of acquiring any ore from these merchant ore concerns, like Corrigan, McKinney & Company, or the possibility of buying such concerns outright?

A. No. I think in one case I mentioned that they could purchase ore from these merchants.

Q. I was not speaking so much about the purchase of ore as the acquisition of ore lands either directly by purchase or by acquisition of the control of one or more of those companies.

A. No.

Q. You had not taken that into consideration?

A. I did not take that into consideration.

Q. Is that a feasible way?

A. I should say yes.

Q. Do you know of any concern of any size that acquired its ore, or the bulk of its ore, in that way?

A. I think the Lackawanna Steel is one instance.

Q. How about the Steel Corporation itself?

A. And the Steel Corporation itself; yes, sir.

Q. Did you take into consideration the Hill lands or the Longyear-Bennett lands, except the one tract of Bennett lands which you said was not included in the Hill ores?

A. I took into consideration a small percentage from the Hill lands in one case.

Q. As to the price at which these lands could be bought, was the price of those lands published much, in the fashion that they hang tags on clothing in stores here in New York?

A. No, sir.

Q. I suppose it is a matter of negotiation in each case, is it not?

A. It is a matter of negotiation; yes, sir.

Q. How is this element of price determined? What factors are taken into consideration?

Mr. Dickinson: I object to that unless it is shown that he is engaged in that business or knows something about it. I understood him to say he did not know anything about prices.

Mr. Reed: If that is so of course I do not expect him to answer my question at all.

By Mr. Reed:

Q. Have you any familiarity with the commercial part of this business?

A. I never have had any familiarity with these negotiations.

Q. I see.

Now, coming back again to something that is more strictly a matter of geology: You testified on cross-examination yesterday that it would probably be a couple of hundred years before these thirty-five per cent. ores are needed in the business. Is that so, in your opinion, as to the 45 per cent. ores?

A. No.

Q. Do you care to give us any estimate of the time within which those ores will probably be considered merchantable?

A. There are certain tonnages of those ores that are merchantable to-day. They have shipped from some of the ranges ores of a lower grade than 45 per cent.

Q. And I think you said that the additional reserves to be counted on, if 45 per cent. ores were accepted as the minimum, would be about two billion tons in the Lake Superior district?

A. That was my statement.

Q. Is there any further significance in the small percentage that the Steel Corporation holds in these low grade ores? I think you testified that its percentage was about ten; that is, that the Corporation owns about ten per cent. of these low grade ores, down to 35 per cent.?

A. Yes, sir.

Q. Has that any connection with the proportion which the Steel Corporation lands bear to the lands upon which high grade ore will probably be developed on further exploration?

A. It has.

Q. Why is that?

A. The ores of all grades in the Lake Superior district occur in a formation which we designate as an iron-bearing formation. No ores have ever been discovered outside of that formation. From this fact you can safely assume that the proportion of high grade ores that will be discovered on the Steel Corporation's holdings will bear the same ratio to the total ore discovered that the Steel Corporation's holdings on the iron formation bear to the total area of the formation.

Q. Some mention was made of the Baraboo district, and you testified, I think, that that was not included in the Wisconsin Tax Commission's estimates, nor was it included in your statement of the percentage of the Steel Corporation's ores in Michigan and Wisconsin?

A. Yes.

Q. You have been in the Baraboo district, have you?

A. I have.

Q. And examined it?

A. I have.

Q. What class of ores is found there?

A. It is a poor quality.

Q. Does it compare with these Gogebic, Cuyuna and Mesabi ores that we have been talking of?

A. It does not.

Q. Is it the same class of ore, the same character of ore geologically?

A. I think it is, geologically, the same thing.

Q. Why is it considered low grade; because of its low iron content?

A. Because of its low iron content.

Q. Have you made any estimate of the total tonnage of ore in the Baraboo region?

A. Of the total tonnage?

Q. Yes.

A. No, I have not.

Q. Or of the percentage of the district which the Steel Corporation controls?

A. No, I do not know that.

Q. Does the Steel Corporation control a large or a small percentage; can you tell us in a general way?

A. In a general way, it controls a small percentage of the Baraboo district.

Q. Are there any other companies in there that own properties in the Baraboo district?

A. Yes.

Q. Can you name some of them?

A. I think it is the Harvester people that own that.

Q. The International Harvester?

A. The International Harvester.

Q. How about the Wisconsin Steel Company? That is a subsidiary company of the International Harvester Company, is it not, or do you know?

A. I don't know.

Q. You spoke of some independent companies on the Mesabi, and Judge Dickinson asked you whether you knew who the stockholders of those companies were. Can you say whether the Steel Corporation or any of its subsidiary companies own stock in those independent companies of which you spoke?

A. I do not know, but I think not.

MR. DICKINSON: I object to his stating what he thinks.

By MR. REED:

Q. Did you ever hear that they did?

MR. DICKINSON: I object to that as hearsay.

By MR. REED:

Q. (Continuing) Until it was suggested in your cross-examination this morning, did you ever hear that in any way the Steel Corporation was interested in those companies?

A. No, I did not.

RE-CROSS EXAMINATION

By MR. DICKINSON:

Q. What amount of available merchantable ore did you assign to the Baraboo district?

A. None.

Q. What is the iron content of it?

A. The average iron content of the material that could be mined, I should say, from an examination of a number of drill holes, would be somewhere around 40 to 43 per cent.

Q. You spoke of ore being shipped as low as 43 per cent. From what section has that been shipped, that you know of?

A. It has been shipped from the Marquette Range and also from the Menominee Range.

Q. Did you have charge of that shipment yourself?

A. I had not.

Q. Do you know to what extent it was shipped?

A. I cannot name the tonnage.

Q. Wasn't it a comparatively small amount, just for mixing purposes?

A. For mixing purposes?

Q. And a comparatively small amount?

A. Yes.

Q. Was it reduced, or was it put up separately with higher grade ore for the purpose of producing iron?

A. No, it was shipped as mined.

Q. But do you know ultimately how it was used?

A. No, I do not.

Q. You expressed an opinion that you thought it was feasible to purchase from ore companies in the Lake Superior region. What do you mean by feasible?

A. I meant that they could be purchased.

Q. Do you know anything about the price at which they could be purchased?

A. I do not.

Q. You mean to say, then, if anybody wanted it bad enough to pay a sufficient price to make the owner part with it, they might get it.

A. Others have purchased in the market in that way, and I think from that it can be assumed that it is feasible for those ores to be purchased.

Q. Do you know of any purchase within the last year of as much in that region as two million tons of ore in the ground?

MR. REED: Which region, Judge?

MR. DICKINSON: The Lake Superior region.

THE WITNESS: Yes.

BY MR. DICKINSON:

Q. Where?

A. On the Menominee Range.

Q. What grade of ore was that?

A. I cannot say definitely; I assumed it was good grade ore as the purchase was made.

Q. What was the percentage of phosphorus?

A. I don't know.

Q. Do you know the price paid of your own knowledge?

A. I do not.

Q. Do you know anything about the price paid?

A. I do.

Q. Did you see any documents or is it just hearsay?

A. It is hearsay.

Q. You spoke of the Lackawanna Steel Company and the United States Steel Corporation having made purchases. When was the last purchase made by the United States Steel Corporation in the Lake Superior district?

A. I do not know.

Q. Did you speak of their buying up merchant concerns or the lands of merchant concerns? Did you use any such expression as that?

MR. REED: I do not know that he did; I think I did.

MR. DICKINSON: Well, in answer to your question.

By MR. DICKINSON:

Q. (Continuing) What merchant concerns, when you answered Mr. Reed's question, were you referring to when you spoke of the Steel Corporation having bought up in the Lake Superior district?

A. The Donora Company was one.

Q. When was that?

A. I don't know the date of that.

Q. Did they buy that or did they acquire that when they took over the Union Steel Company?

A. I think they acquired it when they took over the Union Steel Company, but I am not positive. As I said before, I have had nothing to do with these, and I am answering these questions from the general reports that were circulated.

Q. Can you name any other property taken over or purchased there in large quantities by the United States Steel Corporation within recent years?

MR. REED: How about the Lake Superior Consolidated Iron Mines?

THE WITNESS: I was thinking of recent years, taking it up to the last few years.

By MR. DICKINSON:

Q. When did it get the property of the Lake Superior Consolidated Iron Mines?

A. I don't know.

Q. Was it in recent years?

A. It is within——

Q. (Interposing) Didn't they get it as part of the consolidation when the company was formed, shortly after that transaction?

A. I think they did.

Q. Now, do you know of any recent purchases, within the

last three or four years, in large quantities in that region, made by the United States Steel Corporation?

A. No.

Q. Do you know any large purchases in recent years made by the Lackawanna Company within that region?

A. I do not know what the Lackawanna has purchased.

Q. When you answered that, what were you proceeding on, when you answered the question addressed to you by counsel?

A. On current report.

Q. And you are not speaking, then, of any knowledge that you yourself had about it?

A. I have had no intimate knowledge, no personal knowledge.

Q. Did you understand that the question was addressed to you to elicit your own knowledge, or what you might have had by hearsay?

A. I considered it was addressed to me as to what I had heard.

Q. And it was in that way that you answered it?

A. Yes.

Q. You say you saw a bill of lading of a shipment of manganese at ten shillings from Chile. Did you see more than one?

A. I saw several.

Q. Were they different periods of time, or about the same time, that you saw them?

A. They were running over perhaps two or three years, the shipments.

Q. Where did you see them?

A. In Valparaiso.

Q. What quantities did those shipments cover, and how far apart were they?

A. They covered quantities from—well, I cannot say exactly, but several hundred tons up to cargo shipments of two or three thousand tons.

Q. Do you know whether those were regular constant shipments or just occasional tramp rates? Do you know anything about that of your own knowledge?

A. No, I do not know of my own knowledge.

Q. On what do you base your answer as to the rate of ten shillings from Rio to Europe?

MR. REED: He did not say there was a rate of ten shillings from Rio to Europe.

MR. DICKINSON: Did he not say that?

MR. REED: No; that was from Chile to Europe.

MR. DICKINSON: What?

MR. REED: I say, that was from Chile to Europe.

MR. DICKINSON: I have it from Rio to Europe.

By MR. DICKINSON:

Q. You do not know anything then about any rate on manganese from Rio to Europe?

A. Not definitely.

Q. Not definitely?

A. No.

Q. Is 45 per cent. ore being used now in any large quantity, and if so, where—from the Lake Superior district, I mean?

A. Not in any large quantity.

Q. What would you call a large quantity, in that sense?

A. Well, quantities running into one or two million tons.

Q. Do you know to what amount for the last year ore grading not higher than 45 per cent. of iron content from the Lake Superior district, was shipped?

A. No, I do not. Those figures are on record, I think.

Q. But you cannot give any estimate of that?

A. No.

Q. Do you know any mines producing ore not higher than 45 per cent. that ship any 45 per cent. grade ore?

A. Please read that.

(The question was repeated by the stenographer.)

MR. DICKINSON: Just strike that out, and let me put it this way.

By MR. DICKINSON:

Q. Do you know any mine being worked in Lake Superior

where the grade of ore from such mine does not run any higher than 45 per cent. in iron content?

A. Yes. I think I am safe in this statement, that there are properties that ship ore on the Cascade range that do not have any ore higher than 45 per cent., or, at least, very little higher than that, and I do not know if the Traders' mine ships any higher than that.

Q. Where such ore is shipped from a mine producing not higher than 45 per cent. metallic content, has not that ore some special quality making it desirable for mixing purposes?

A. I think in many instances it is a low phosphorus ore. I would not say that all of the ore, though, that is shipped lower than 45 per cent. is a specially low phosphorus ore. I do not know that.

Q. Do you know, as a matter of fact, that any mine there is shipping ore where there is no ore mined richer than 45 per cent. in those mines?

A. I think I can name the Traders Mine.

Q. Have you been there?

A. I have.

Q. When were you there?

A. It has been several years since I was there. I have been there several times, however.

Q. Well, when were you there last?

A. I do not know.

Q. Were you there last year?

A. No, sir.

Q. The year before?

A. No, sir.

Q. Or the year before that?

A. No, I think not. To the best of my recollection I have not been on the Traders' property for five years.

Q. Can you say that you know of your own knowledge that this Traders Mine as long as five years ago was shipping ore that did not grade more than 45 per cent. in metallic content, and if so, to what extent?

A. I do not know the extent, and the grade is taken from the records of ore shipments.

Q. Not from information you got there at the mines?

A. No.

Q. Where is this Traders Mine?

A. It is just north of Iron Mountain, on the Menominee range.

Q. How much was the output of that mine four years ago?

A. I do not know.

Q. Do you know what it was three years ago?

A. I could not name the output in any year of that mine.

Q. Well, is it a large or a small mine?

A. There is considerable tonnage there. I do not know how much.

Q. And you cannot give the amount of tonnage of 45 per cent. ore that was shipped from there for any year?

A. No, I have not those figures.

Q. Now, you spoke of the Cascade Range. Where is that?

A. It is on the Marquette Range, or it is part of the Marquette Range.

Q. When you spoke of 75 per cent. of the Brazilian estimate being based upon properties which you yourself saw, did you mean 75 per cent. of the area down there or 75 per cent. of what you estimated the whole tonnage to be?

A. Seventy-five per cent. of the tonnage.

Q. As you estimated it?

A. As I estimated it.

Q. Now, what is that estimate?

A. It was, as I remember it, some seven billion tons.

MR. DICKINSON: That is all.

MR. REED: That is all, Mr. Merriam. Thank you. Mr. Olcott.

MR. REED: At this point the defense offers in evidence Defendants' Exhibit No. 100, being the estimate of iron ore resources of the Tennessee Coal, Iron & Railroad Company as testified to by Mr. Merriam.

MR. DICKINSON: This is excepted to as incompetent, upon the ground that it is not shown upon what basis it is made or from what data it was prepared, and that no original data are produced to sustain it.

(The paper referred to was thereupon marked Defendants' Exhibit (Merriam) No. 100, October 3, 1913," and will be found in the volume of exhibits.)

WILLIAM JAMES OLCOTT,

was called as a witness on behalf of the Defendants, and being duly sworn, testified as follows:

DIRECT EXAMINATION

By Mr. Reed:

Q. Mr. Olcott, where do you live?

A. I live at Duluth, Minnesota.

Q. How long have you lived there?

A. Since the 6th day of February, 1894.

Q. Prior to that time where did you live?

A. Before going to Duluth I resided on the Gogebic range.

Q. Where were you born?

A. I was born in Detroit, Michigan.

Q. When did you first go to the iron country?

A. I moved from Detroit to Marquette in 1868.

Q. At which time you were not very old, were you?

A. I was supposed to be six years of age.

Q. How long did you live in Marquette?

A. I lived there until I went away to school at Ann Arbor in 1878.

Q. Did you go to college at the Ann Arbor University?

A. I did. I was in the high school two years and graduated from the university in 1883. I took post graduate work in 1884 and on the 1st of January, 1885, I went to the Chapin Mine, at Iron Mountain, Michigan.

Q. What degrees did you take at the University of Michigan?

A. First Ph. B. I took the degree of Master of Science in 1884.

Q. What was your first employment?

A. I was employed at the Chapin mine at Iron Mountain, Michigan, as assistant engineer.

Q. That was in 1884, was it?

A. No; January 1, 1885.

Q. How long did you remain at the Chapin Mine?

A. I remained at the Chapin mine eighteen months.

Q. All the time in the same capacity?

A. No; I was employed in various capacities. My principal work was assistant engineer, and after I had been there a few months the chief engineer went to Europe to investigate some different methods of mining that they were figuring on using at the Chapin mine. He was gone six or seven months, and while he was gone I did all of the engineering work. At various intervals while I was there I worked in different capacities, as chemist at the mine, taking inventories, working in the office and making myself useful wherever I could.

Q. You spoke of being assistant engineer and engineer. You mean mining engineer, of course?

A. Mining engineer; yes, sir.

Q. Then in what year did you leave the Chapin Company?

A. I left the Chapin Company in June, 1886. I went to the Gogebic range, which was then just being opened up, and was engineer and chemist at the Ashland and Germania mines, located at Ironwood and Hurley.

Q. How long did you remain on the Gogebic range altogether?

A. I remained there until February, 1894.

Q. You have told us about the Ashland and Germania. What other mines were you employed at?

A. I left the Ashland and Germania mines in January, 1890, to take a position as chemist and engineer for what was designated at that time as the Penokee and Gogebic Consolidated Iron Mines. This company controlled six mines, the Superior Mine located in Wisconsin, the Aurora Mine, the Palms, and the Comet in Michigan.

Q. You did not tell us what your connection with the Ashland and Germania mines was, did you? What was your position there?

A. Yes; I did. I was mining engineer and chemist.

Q. And at the Penokee and Gogebic Consolidated mines, what was your position?

A. My first position was mining engineer and chemist.

Q. How long did you continue to be mining engineer and chemist there?

A. A very short time. In September, 1890, I was made superintendent of the Colby and Tilden mines. I should have inserted in the list of the Penokee and Gogebic the Colby and Tilden.

Q. Those belonged to the same company, did they?

A. Yes; there were six altogether.

Q. How long did you continue as superintendent of those two mines?

A. For two years.

Q. That brings us up to 1892?

A. I was superintendent of the Colby and Tilden in 1890. I was made general superintendent of the Penokee and Gogebic mines in 1892, and continued in that position until February, 1894, when I went to Duluth.

Q. And when you went to Duluth it was to take what position?

A. It was to take the position of general superintendent for the Oliver Iron Mining Company. No; when I went to Duluth it was as general superintendent for the Lake Superior Consolidated Iron Mines.

Q. When you first went there, in 1894?

A. Yes; in 1894.

Q. Their mines were all on the Mesabi, practically, were they?

A. Yes.

Q. What were the chief mines of that company at that time, in 1894?

A. We had the Hull-Rust mine, the Burt, the Day and the Morris, located at Hibbing; the Adams and Spruce mine, at Eveleth; the Mesabi Mountain mine and the Lone Jack mine and the Ohio mine at Virginia, and the Duluth mine at Biwabik.

Q. That was 1894?

A. Yes.

Q. How long did you continue to be general superintendent, was it, of that company?

A. I was general superintendent until the 6th of February, 1901.

Q. Then what position did you take?

A. I was general superintendent of the Oliver Iron Mining Company.

Q. And after that?

A. After that I was appointed in 1902 as general manager of the Oliver Iron Mining Company. In 1905 I was vice-president, and April 1, 1909, I was made president of the Oliver Iron Mining Company.

Q. And you are still president of the Oliver Iron Mining Company?

A. I am still president.

Q. I want to get back to these different mines in the old ranges that you were working in. Take first the Chapin Mine, to which you went in 1885. How deep were they mining in the Chapin when you went there?

A. About 700 feet.

Q. How deep are they mining in the Chapin now?

A. Something over 1,400 feet.

Q. How does the mine compare in richness and quality and width of the ore in which they are working to-day with the ore in which they were working in 1885?

A. I think it has as large a capacity now as it had then.

Q. How about the quality of the ore, Mr. Olcott?

A. The quality of the ore is practically the same.

Q. How about the width of the veins?

A. They are about the same.

Q. Has the Chapin been producing all of the 28 years since you went there?

A. Yes, and before that.

Q. How long had it been mined before you went there?

A. I think about five or six years, at least.

Q. The Chapin is in what range?

A. The Menominee.

Q. As to this Ashland Mine, how deep had it gone when you went there in 1886?

A. They were just opening up the mine at that time. They had a shaft down to a depth of about 125 feet.

Q. In the ore?

A. Yes, they were in ore at that time.

Q. Has that mine been operated since then?

A. Yes.

Q. Steadily?

A. Yes.

Q. How deep is it now?

A. Oh, I think they are down 1,100 or 1,200 feet.

Q. How about the Germania?

A. The Germania mine is not operating.

Q. Not operating?

A. No, sir.

Q. How about those mines of the Penokee-Gogebic Consolidated? Were they just beginning when you went to them, or had they already been worked?

A. Some work had already been done on them.

Q. What were the deepest workings in those mines at that time?

A. Somewhere between five and six hundred feet, I think.

Q. What are the deepest workings now?

A. I think about 1,400 feet.

Q. Has the quality of the ore been maintained as they go down?

A. Yes.

Q. You are familiar with those mines in these days?

A. I am, some of them.

Q. Some of them are operated by your company at the present time?

A. The Tilden Mine is.

Q. How has it kept up?

A. The quality of the ore is the same as it has been, practically.

Q. Just the same as it was back in those days?

A. Yes.

Q. Take the Gogebic Mine; take all these old ranges, the Marquette, Menominee and Gogebic; generally speaking, have those mines kept up as they went on down? I mean,

have the quality and width of the ore kept up as the mining went lower?

A. Yes.

Q. Is that true of all three ranges?

A. It is.

Q. Is there any indication that the bottom of the ore has been reached in those ranges?

A. The prospects to-day are better than they were fifteen or twenty years ago.

Q. And are you familiar with the depth to which different mines have gone in those ranges?

A. With a great many of them.

Q. What is the deepest iron mine in Michigan now? I mean, of course, what are the deepest workings in any iron mine in Michigan?

A. I think the Newport Mine, with a depth of 2,400 feet, is the deepest.

Q. How is the quality of the ore in their lowest workings?

A. The same as they have always had.

Q. How about the width of the vein?

A. It maintains its width.

Q. You are familiar with the copper workings in Michigan, are you, to any extent?

A. Not especially; I never have had any experience there. I have been there.

Q. You have been in the mines?

A. I have been down in some of the mines.

Q. I believe they have gone down about a mile in some of their workings, have they not?

A. Yes, the Calumet and Hecla has gone down a mile and a little over.

Q. Do you know any reason why these iron mines in Michigan and Wisconsin should not be mined to a depth of a mile?

A. I know of no difficulty, no physical difficulty.

Q. You have had considerable experience in operating that kind of mines, have you not, those shaft mines?

A. Yes, I have operated mines to a depth of 2,200 feet.

Q. Operated yourself to that depth?

A. Yes.

Q. Is there any physical or commercial reason why the ore that lies at the 5,000 feet level should not be mined?

A. None whatever. It will take a little heavier hoisting machinery, that is all, and cost a little more for fuel.

Q. Will that increase cost for heavier hoisting machinery and the additional fuel cost be a substantial increase in the cost per ton?

A. I don't think so; no, sir.

Q. Will it be sufficient to render that ore non-competitive?

A. No, sir.

Q. What is the reason, Mr. Olcott, that the old range ores sell for more on the market, and always have sold for more?

A. They have brought a higher price on account of their better physical structure.

Q. What do you mean by that?

A. When the Mesabi Range was opened up and the ore was tested in the furnace they had considerable difficulty on account of the fineness of the ore; the ore went to pieces. Instead of being in chunks and porous it was very fine, and at first they were only able to use about ten to fifteen per cent. in their furnace mixture, and for that reason there was a differential as high as one dollar a ton between the old range and Mesabi ranges.

Q. You mean that the old range ores were worth that much more than the Mesabi?

A. They brought that much more than the Mesabi.

Mr. Dickinson: Did you give the date of that?

The Witness: It was in the early days on the Mesabi, the earliest shipments, about 1893 or 1894.

By Mr. Reed:

Q. Is there still a differential between the two?

A. Yes.

Q. Has there always been?

A. There always has been.

Q. What is the present differential?

A. I do not want to guess at this business. I have a memorandum, and I can get it exact.

MR. REED: It is already in evidence, Mr. Colton.

MR. COLTON: It is not in for 1912 and 1913. Here it is. (Showing witness U. S. Geological Survey report of production of iron ore, etc.)

THE WITNESS: It is about 25 or 35 cents.

MR. COLTON: Twenty-five cents for 1912 and 35 cents for 1913.

THE WITNESS: 1913 is 25 cents. That is on the Bessemer grade of ore, and on the non-Bessemer there is 20 cents differential. I notice there in 1900 the differential was $1.00.

By MR. REED:

Q. In 1900?

A. Yes.

Q. What is the practical difference to the furnace man in these days, Mr. Olcott, between the two grades of ore, the Old Range and the Mesabi?

A. You mean in price?

Q. No, you have explained the difference in price. What is the present reason for the difference in price?

A. It is on account of its structure; that the Mesabi ore is finer in structure and is a little harder to work, and there is more waste on account of fine dust due to the finer texture of the ore.

Q. Which ore is preferred by the furnace men to-day?

A. They had rather have the old range ores.

Q. You have kept familiar with the developments in the old ranges, have you?

A. Yes, sir.

Q. What would you say, Mr. Olcott, as to the possibility of supplying a new concern that used, we will say, a million and a half tons a year, with an adequate reserve, say, for fifty years?

A. I do not think there would be any difficulty in supplying them.

Q. Do you know enough about the steel business to tell us what kind of steel works are being built now; Bessemer or open hearth?

A. All the new plants of recent years are open hearth.

Q. And for that process of steel making is this non-Bessemer ore suited?

A. Yes, sir.

Q. Would there be any difficulty in obtaining, say, seventy-five million tons of reserves of ore suitable for open hearth steel making for such a new concern?

A. I do not think so.

Q. Suppose you were commissioned to obtain such an ore reserve, where would you set about to secure it?

A. I would not expect in a day or two that I could acquire any such reserves. That has not been the practice, but given a reasonable time, I think that I would have no difficulty in securing a tonnage of that amount.

Q. What do you mean by a reasonable time?

A. Probably a year; possibly a year. It would require negotiations and skillful negotiations, and those always take time—a reasonable length of time.

Q. You would want to look about and make a selection, would you, deliberately?

A. Sure.

Q. Could you do it in a year?

A. I believe I could.

Q. Could you have it all ready by the time the steel works itself was built?

A. I think I could.

Q. What are some of the districts to which you would go in looking up a supply of that kind?

A. Well, I would go to all the districts in the Lake Superior region. I think there is ore on every district that could be acquired at reasonable prices.

Q. I do not suppose that the owners put up a sign telling what the price is?

A. Nobody could tell what the price was until he had finished his negotiations. It would be a matter of bargaining and dealing; but I believe that those ores could be secured under lease for from 35 to 80 cents a ton, depending on the quality of the ore and the location of the mines, and the general conditions; the cheapness of mining, the size of the ore deposits, and various conditions, all of which would have

to be taken into consideration in investigating such a proposition.

Q. And I suppose the price would depend on all of those elements, would it not?

A. Yes; it would depend upon all of them.

Q. Now, in making that statement, Mr. Olcott, are you taking into consideration the Hill lands?—the Great Northern trustees' properties?

A. No, sir.

Q. You were not including them?

A. No, sir.

Q. (Continuing) In the sources of possible supply?

A. No, sir.

Q. Were you including the Longyear-Bennett mines?

A. Not any of the Longyear-Bennett mines that were included in the Hill lease.

Q. You are familiar with those ores, are you?

A. I am.

Q. Are those ores suitable for such a hypothetical new concern that was looking for a supply of ore from which to make open hearth steel?

A. They are.

Mr. Dickinson: Which ores do you mean now?

Mr. Reed: Those he has just mentioned—the Hill and the Longyear-Bennett ores.

By Mr. Reed:

Q. Were you including the Cuyuna ores in your suggested sources of supply?

A. I would try to get some from up there. I think that quite a large supply could be secured from the Cuyuna, but I would not rely on that entirely.

Q. You would not have to?

A. I would try to get ores from different ranges so as to get a good mixture. Furnace people like to have ores from different ranges.

Q. You would not go to any one place?

A. No. I would go to different places, where I could get ores to the best advantage, and get the best ores.

Q. What is the present condition of the ore market up there; that is, the market for ore land?

A. It is not very active.

Q. Is that because the demand has absorbed all of the available ore lands?

A. I think it has, to quite a large extent. I do not think that the furnace people feel very anxious about acquiring ore.

Q. Did you get my question. I asked you if the demand has absorbed all the ore lands?

A. It has not.

Q. You said the furnace people did not feel anxious. I thought you misunderstood the question, because the two parts of your answer did not agree with one another. How about development work on the old ranges? Has there been much done recently?

A. There has been considerable work done and quite large tonnages developed in the last year—last few years—on the Gogebic and the Menominee ranges, and some on the Marquette.

Q. You are familiar with those developments, are you?

A. In a general way; yes, sir.

Q. Whereabouts have most of them been made?

A. The Palms and Anvil mines have developed a very large ore body near Bessemer, within the last year or two.

Q. That is on the Gogebic range?

A. Yes, that is on the Gogebic range. They have shown up an ore body there of over 2,000 feet long, and in places it has averaged over 125 feet in width, and they have shown that ore to extend at least 300 feet high. The ore is all clean and very high grade hematite.

Q. Running about how high in iron?

A. I think it would average over 60 per cent.

Q. When was that development made?

A. That ore has been found during the last year and a half.

Q. Who owns the Palms mine?

A. Mr. Schlessinger, of Milwaukee.

Q. Does he hold those ores as an investment?

A. He holds them under lease, and sells his ores.

Q. He does not operate steel works, does he?

A. No, sir.

Q. Tell us the location of some other developments?

A. There has been a very large body of ore found east of Bessemer and south of Wakefield, by M. A. Hanna & Company during the last year.

Q. Is the full extent of that discovery or development known yet?

A. No, it is not, but from what they have done they know it is a very large deposit of ore.

Q. Are they keeping up their development?

A. They are still drilling and preparing to open up the mine.

Q. Can you give us any idea of the size of the ore body that has been developed there?

A. I could not, no sir; not as to tonnage. I have not the data available. I know from private information that it is a large deposit, but I could not say as to the exact tonnage.

Q. Have there been any other developments that you think of in the Gogebic?

A. Yes; there is a find right west of this M. A. Hanna property that is a portion of the same deposit, controlled by Mr. A. B. Coates.

Q. Where does he live?

A. He lives in Virginia, Minnesota.

Q. Is he connected with any steel company?

A. No, he is a private operator.

Q. He owns these lands for investment, does he?

A. For investment and sale; to operate or to sell them.

Mr. Dickinson: Are you speaking of selling the land or selling the ore?

The Witness: Well, I think he would sell the ore; that is, he would sell his lease or sell his ore. He will either operate it himself or sell it. I do not know what he is going to do. I think it could be easily purchased.

By Mr. Reed:

Q. Do you believe that all of the development in the Gogebic has been reached?

A. I do not.

Q. What leads you to think that there is more to come?

A. When I was a young engineer at the Ashland-Germania mines, I was quite familiar with not only the Ashland-Germania, but also the Norrie group of mines. This ore in both places lies on a diorite dike. This dike cuts into the foot wall and forms a trough upon which the ore deposit rests, and it pitches to the east generally, at quite a flat angle of about, say, twenty-five to thirty degrees. It was the opinion of most of the mining men and engineers at that time that when we got down to that dike that that would be the bottom of these mines, and I made an estimate in a rough way of about how long the Norrie mine would last, and I figured at their present output that the mine would last about eight or nine years.

Q. That was in what year?

A. That was when I was at the Ashland mine, along about 1888 or 1889, somewhere. That group of mines has been producing about a million tons ever since, and there is as much ore there now that you can see as there was then, the fact being that as they sunk their shafts below these main dikes, they encountered other lenses, and there is no reason that I can see why that succession of lenses should not continue to an indefinite depth. It has been shown at the Palms, this large deposit that they have found within the last year. They went through that same experience. They had ore nearer the surface where the ore rested on a dike, and the ore was supposed to be about all exhausted. Mr. Schlessinger sunk this shaft to a depth of about 1,200 feet, basing his expenditures and his daring upon the hope of finding ore at lower levels; and he has found this large deposit of ore at a depth of 1,200 to 1,400 feet; and this has been proven at practically every mine on the Gogebic Range, so that basing my opinion upon the experience of the last twenty years on the Gogebic Range, I am not so conservative as I was twenty years ago. I believe that they will find ores there at a depth of three or four thousand feet. I do not think there is any limit—physical limit—to the ore going down.

Q. Has any attempt ever been made by diamond drilling to reach the supposed bottom of these deposits?

A. No, sir. It would not be feasible to attempt to secure such information on the Gogebic Range, for the reason that the ground is very hard, and it is impossible to tell where the diamond drill rods would go.

Q. They would get deflected?

A. They are very limber, and they are liable to take the line of least resistance, so that the information derived from the diamond drill work on the Gogebic Range is not as accurate as it is by sinking drifts or shafts.

Q. So that it is impossible to verify the general belief in the indefinite depth of these mines by any very extensive diamond drill work?

A. It would not be accurate, in my opinion.

Q. Before we leave that subject of diamond drilling, I want to ask you a little about it. How is ore generally measured up in the Lake Superior ranges?

A. In developed mines they take the openings that have been made in mining operations, and the records that are kept by the mining engineers, and they can measure up the tonnage that is in a developed mine from that data.

Q. Yes, but is all of the ore that is included in the Tax Commission estimates in developed mines?

A. No, sir, it is not.

Q. Are you taxed for ore that is not developed by mining operations?

A. Yes. They make a reasonabe allowance, going about 100 feet below the bottom level.

Q. You are speaking of the old ranges when you say they tax you 100 feet below the lowest workings?

A. Yes, sir; in Michigan.

Q. That is the place you were speaking of when you say you calculate the tonnage by the workings?

A. Yes, sir.

Q. Where the property has not been developed by workings, are you overtaxed for the tonnage shown by the diamond drilling?

A. I believe they make some reasonable estimate if they have data enough to make an estimate.

Q. Upon the Mesabi are you taxed for properties that are not opened in mining operations yet?

A. Yes, sir.

Q. How does the Tax Commission ascertain the tonnage in such a property?

A. The Tax Commission of Minnesota have complete records of all the development and exploring that has been done on every property. If it is done by diamond drilling, they have complete blue prints of every drill hole and the location of the drill holes, and all of the data pertaining to the drilling, showing the depth of the holes, the average of every five foot analysis, both as to iron and phosphorus, and from that data they are in a position to estimate very accurately the tonnage.

Q. When properties come to be bought and sold, if they have not been opened up by mining operations, how do you determine the tonnage?

A. They determine the tonnage by the records of the diamond drill work that has been done on the property.

Q. The same method you spoke of with the Tax Commission?

A. Absolutely the same.

Q. When you come to put your reserves into your reserve book, do you use the same method?

A. The same method and the same data.

Q. Is there any other known method, Mr. Olcott, for determining the tonnage in a mine that is not yet opened?

A. There is no other method.

Q. Where this work is done with the usual care, how do the subsequent workings on such a property tend to confirm the diamond drillings?

A. All the work that is done on the Mesabi shows that the quality of the ore and the tonnage of ore as disclosed by the drilling is very close to the estimates that were made on the property.

Q. All this started in our discussion of the Gogebic Range and of other developments of it. You had been speaking of

developments vertically. How about an extension of the area of the ore mines horizontally?

A. On the Gogebic?

Q. Yes.

A. I do not think there will be any, for the reason that the ore-bearing rock formation is limited between the slates on the north and the quartzite on the foot, and I believe that the width of that formation will continue pretty uniformly at greater depth.

Q. You think that is pretty well defined now, do you?

A. It is pretty well defined now, yes, from the work we have done on our upper levels. I am not saying it is not possible for other lenses to be found at greater depth, but, based on our experience, it is not very often that we find ore deposits off of the footwall on the Gogebic Range.

Q. Well, now, do you think that other deposits will be developed in other locations on the Gogebic range, or has exploration gone to the point where it can be said that the limits of the district are well known and defined?

A. No, I think there are portions of the Gogebic range unexplored that will be explored and ungodly deposits found on them.

Q. How about the other ranges? Take the Menominee, and by the Menominee I mean to include the Crystal Falls and Iron River.

A. There have been very large developments of tonnage in the last eight or ten years at Crystal Falls and Iron River.

Q. Can you give us any idea of the tonnage disclosed at Crystal Falls?

A. I could not guess at it. I know a great many mines that have been found and developed there and are being found within recent years.

Q. Have you any idea of the tonnage at Iron River?

A. I have not, and I could not guess at it. Those estimates are all a matter of record in the Tax Commission's office in Michigan, and I do not pretend to carry those figures in my head.

Q. Just describe the nature of the development work that has been done there.

A. In Iron River and Crystal Falls there have been quite a large number of mines opened up within the last three or four years. Those have been found in a great measure by diamond drilling, and the drills have shown that the ore goes to a much greater depth than it was originally thought it would go in the district.

Q. What depth have the drills gone?

A. They have gone over 1,000 feet, 1,500 feet.

Q. And still in ore?

A. So I understand.

Q. When were developments begun in those districts?

A. In Iron River and Crystal Falls, away back in the eighties, I think.

Q. Were those districts important as early as that?

A. Mining operations were conducted in the eighties.

Q. Do you think there are apt to be any further developments in Crystal Falls or Iron River?

A. I think so.

Q. You do not think the limit of development has been reached there yet?

A. Not by any means.

Q. Do you know any properties that have recently been brought in there?

A. I do.

Q. That are not held by steel companies?

A. I do. I suppose you mean found?

Q. Yes. "Brought in" is the term we use out in the oil region. What are those properties? Can you mention some of them?

A. I think the largest that has been found recently is the property that was found by what is called the Nevada Company.

Q. What concern is that?

A. That is controlled by Mr. Longyear, Mr. Hartley and Mr. Porter, I think, of Chicago.

Q. The Steel Corporation has no interest in that?

A. None whatsoever.

Q. Either disclosed or undisclosed?

MR. DICKINSON: I object to that; the witness has not quali-

fied himself to make any such statement as that, and I do not understand that he has made it.

By Mr. Reed:

Q. What company operates all of the mining properties of the United States Steel Corporation in the Lake Superior district?

A. The Oliver Iron Mining Company.

Q. Who is the president of that company?

A. I am.

Q. Do you think you know what properties your company has in a general way?

A. I think so.

Q. Do you think that if the Steel Corporation had any mining properties in the Lake Superior district they would have concealed it from you?

Mr. Dickinson: I object to that as incompetent and irrelevant.

The Witness: No, sir.

By Mr. Reed:

Q. Have you ever known the Steel Corporation to have interests in mining properties there that had been concealed from you?

A. No, sir.

Q. Is the Steel Corporation, to the best of your knowledge and belief, interested in this Nevada Company?

Mr. Dickinson: I object to that as incompetent.

The Witness: It is not, to my knowledge.

By Mr. Reed:

Q. Down on the Marquette range, have there been any developments there?

A. There have been some developments in recent years, mostly by the Cleveland Cliffs Iron Company. They have developed several large mines within the last few years on the Marquette range, and also a number of mines in the Swanzy district.

Q. I believe a suggestion was made yesterday in cross examination that the Steel Corporation might be surreptitiously interested in the Cleveland Cliffs Company. Do you know whether it is or not?

A. Not to my knowledge.

Q. Did you ever hear the suggestion made before?

A. I never did.

MR. COLTON: How was the suggestion made as long as you charge it?

MR. REED: As a connection of the Pickands, Mather Company.

MR. COLTON: I merely made the suggestion that it was connected with the Pickands, Mather Company.

MR. REED: Wasn't it one of the companies you asked Mr. Leith about?

MR. COLTON: I asked him whether it was connected with the Pickands, Mather Comapny.

MR. SEVERANCE: That is not the same Mather.

MR. COLTON: W. G., is it not?

MR. SEVERANCE: Yes.

MR. COLTON: Well, they are partners.

MR. SEVERANCE: Samuel Mather. W. G. is not the one that is a director of the Steel Corporation.

MR. REED: The connection is a little remote.

By MR. REED:

Q. Is there any connection between Pickands, Mather and the Steel Corporation?

A. Not that I know of, except that we are competitors.

Q. How do the holdings of the Cleveland Cliffs Company in Michigan compare with the holdings of your company?

A. I think they have a much larger tonnage.

Q. Are there other ore mining concerns, I mean as distinguished from the Steel Corporation, that own large tonnages in Michigan?

A. There are.

Q. Are any of these companies unconnected with any steel company?

A. Yes.

Q. I wish you would name some of them.

A. The E. N. Brietung Company have quite large holdings in Marquette, and they have quite a large amount of lands on the Menominee range. Oglebay, Norton & Company of

Cleveland have mines on the Mesabi, Marquette, Gogebic and Menominee ranges.

Corrigan, McKinney & Company have mines on the Mesabi and Menominee ranges.

Sellwood has mines on the Mesabi range.

Mr. George St. Clair operates a mine on the Vermillion range, and there are several other properties that are owned and operated by independents who have no furnace connection.

Q. I was asking you particularly about Michigan, but I see you have included some Vermillion and Mesabi properties. You do not mean that that is a complete list?

A. No, that is not complete; it is just what comes to my mind. I could furnish a complete list if it was necessary.

Q. Is there enough ore, Mr. Olcott, in the Longyear & Bennett lands and Hill lands to equip a large steel company?

A. I think so.

Q. Is there enough ore in the hands of these independent ore merchants and merchant concerns to equip a steel company?

A. I think so.

Q. A large steel company?

A. I think so.

Mr. Dickinson: What do you mean by a large steel company? Will you give some definite figure?

Q. (Continuing) Let us say a steel company that uses from two million to two and a half million tons a year; could they handle a concern like that?

A. I think so.

Q. I mean, could they supply the ore?

A. Yes.

Q. I neglected to ask you whether any of those concerns you named as holding ore properties were in any way controlled or owned by the Steel Corporation.

A. Absolutely independent.

Q. Absolutely independent of the Oliver Iron Mining Company?

A. Yes.

Q. And the United States Steel Corporation?

A. Yes.

Q. Now, suppose that a new concern of this sort were to start to collect its reserves now at the rates of royalty that you mentioned, say thirty to eighty-five cents, I think you said, would not such a concern be at a great disadvantage as compared with the old concerns that bought their ores years ago when they were cheap?

A. I do not think so; they would probably buy most of their properties or acquire them as leases and pay a royalty based upon an annual minimum, which would require an expenditure for royalty as the ore was shipped. You might take, for instance, some people who have acquired—I have in mind, for instance, the Sauntry mine, which was acquired in 1899. They paid $750,000 for the fee of that property, and we paid out taxes since that time of over a million and a quarter on this one mine.

Q. Three-quarters of a million?

A. Yes, and that is a fee mine, and of course you are out the interest on your investment, and you are paying your taxes all the time.

Q. So that the apparent handicap that this new concern would be under in paying higher prices is not as great as it would seem?

A. I do not think it would be.

Q. Now, Mr. Olcott, are you familiar with the Baraboo range?

A. I am quite familiar with parts of it, yes.

Q. What kind of ore do you find down there?

A. We have not been able to find much there yet. We have spent a million dollars or more in the last few years, and we have about come to the conclusion that it is not a range.

Q. Can you give us any estimate of the quantity of merchantable ore that there is in that district?

A. I do not believe there is enough down there to mine, to warrant anyone going in there.

Q. If there is not any merchantable ore, it is pretty hard to state your percentage of the merchantable ore?

A. Yes.

Q. What percentage of the district have you?

A. I haven't any idea. We have got a few lands down there, and in the last two or three years we have been spending considerable money in the hope of finding deposits there, but we have been much disappointed, and we have come to the conclusion that it is not much of a mining proposition; more of a pumping proposition than it is mining.

Q. If you were looking for ore for this hypothetical new concern, Mr. Olcott, would you look for it on the Baraboo range?

A. I would not.

Q. You would not waste much time on that, would you?

A. I would not go near it.

Q. It is not proper to include that among these high grade reserves?

A. It has never been included in the Lake Superior reserves.

Q. And is the Baraboo district usually meant when you speak of the Lake Superior ranges?

A. It is not.

Q. Does the Wisconsin Tax Commission tax the Baraboo properties as iron ore mines?

A. No, sir.

Q. What, in your opinion, Mr. Olcott, would be the result of any attempt to monopolize or corner the Lake Superior ores of the better grades by buying them all into one company? In the first place, do you think such an attempt would be successful?

A. I do not.

MR. DICKINSON: I object to that as incompetent and irrelevant. The witness has not shown himself qualified to speak on such a theoretical question as that.

MR. REED: Now will you repeat the question, please?

(The question and answer were read by the stenographer.)

By MR. REED:

Q. What, in your opinion, would result if an effort to do so were made?

A. I think it would increase the activity in explorations, and that additional ore deposits would be found.

Q. Mr. Olcott, we have spoken of a number of sources from which iron lands could possibly be obtained for this hypothetical steel company. Are you familiar with the condition of the market for mined ore from year to year?

A. I think so; yes, sir.

Q. And in a general way, with the condition of the business of these merchant ore miners?

A. Yes, sir.

Q. Can you tell us whether or not in the past few years they have been able to sell all of the ore that they could mine?

A. I do not believe there has ever been a year for the last ten or twelve years when they could not have mined more ore than they could have sold.

Q. That they could not have mined more ore than they could have sold?

A. Than they actually sold.

Q. Do you believe a new steel company of that size would be able to supply itself by purchase from such merchant mines?

A. I would not say that it could get all of it, but I think they could get a very large tonnage in the open market.

Q. A good many steel companies have been doing that, have they not?

A. A good many. It has been the practice for years.

Q. And a good many steel companies that have their own reserves have been buying ore in that way?

A. Some have, yes; a good many have.

Q. A good many of the other steel companies have been buying ore in the past few years, have they not?

A. Yes, sir.

Mr. Dickinson: What other steel companies do you mean?

Mr. Reed: Well, will you give us the names of some of them, Mr. Olcott?

Mr. Dickinson: I do not mean the names. You say "other." Other than what?

Mr. Reed: Other than the United States Steel Corporation.

By Mr. Reed:

Q. Will you give us the names of some of the other steel companies?

A. The Inland Steel Company has been buying properties in the last few years. Jones & Laughlin, M. A. Hanna & Company and several others which I have not definitely in mind.

Q. Has the Youngstown Sheet & Tube bought some?

A. I do not know. I know they have started a steel plant.

Q. Has there been any scramble to buy ore lands in the Lake Superior district?

A. Not in the last few years.

Q. Have these steel companies that have been buying been snapping up lands without discrimination as to quality?

A. No, sir.

Mr. Reed: If it suits you, Judge, we will adjourn now, as the next subject to be taken up is a rather large one.

Mr. Dickinson: Just as you say, Mr. Reed.

(Whereupon an adjournment was taken until Monday, October 6, 1913, at 10:30 o'clock A. M.)

EIGHTY-NINTH DAY.

Empire Building,
71 Broadway, New York City.

Monday, October 6, 1913.

Before Special Examiner John Arthur Brown.

Present on behalf of the United States, Mr. Dickinson and Mr. Colton.

Present on behalf of the Defendants, Mr. Lindabury, Mr. Severance, Mr. Bolling and Mr. Reed; also, on behalf of the Great Northern Iron Ore Interests, Mr. Chester W. Cuthell.

WILLIAM JAMES OLCOTT

the witness under examination at the taking of the adjournment, resumed the stand.

DIRECT EXAMINATION (Continued)

By Mr. Reed:

Q. Mr. Olcott, is there any statement in your testimony of Friday about the Sauntry mine that you wish to correct?

A. There is.

Q. What is it, please?

A. When I made my statement I relied somewhat on memory. On looking up the information I find that I was in error, and I would like to make a correction.

Q. What are the facts?

A. The facts are that the Sauntry mine was purchased in 1899 for $700,000.

Q. And not——

A. And not $750,000, as I think I said.

I find the taxes on the Sauntry mine since purchase amount to a little over $600,000. I had in mind the taxes on the Sauntry and Alpena mines together. During the past three years, however, our taxes on the Sauntry mine have ranged from $145,000 to $135,000 a year; so that in the ten-year period, which was the point I was trying to bring out, the amount paid

in taxes would be about double what the property cost. The facts are practically as I stated them, but I wanted to get the figures correct.

Q. Mr. Olcott, about the year 1907 had you given any consideration to the consumption of iron ore of this country?

A. I had.

Q. What had been the trend of the consumption, say in the period from 1880 up to 1907?

A. You refer to the Lake Superior region, I suppose?

Q. I am speaking now only of the Lake Superior region, of course.

MR. DICKINSON: 1880, you say?

MR. REED: 1880.

THE WITNESS: I had studied the question of consumption in the Lake Superior region for a number of years, and in 1907 an investigation showed that beginning with 1880, which was the year in which the Menominee range made its first shipment, up to 1907, practically twenty-eight years, the production had doubled uniformly and regularly in periods of six and a half to seven years; so that while the output in 1880 was almost two million tons—one million, nine hundred and some odd thousand tons—in 1907 it had increased to 42,000,000.

By MR. REED:

Q. Up to 1907, then, it had increased in geometric ratio?

A. In a uniform geometric ratio.

Q. Has that been the fact since?

A. It has not.

Q. The output has not doubled in the last six or seven years, then?

A. No, it has not.

Q. I call your attention to the lease of ore properties which is shown as the Chemung lease. When was that lease taken?

A. The Chemung lease was taken the first day of January, 1903.

Q. About what tonnage was indicated in those properties at the time the lease was taken?

A. Approximately 56 million tons.

Q. What tonnage is now indicated in those properties, if any further explorations have been made?

A. Approximately 70,000,000.

Q. I infer, then, that exploration has been continued on that property?

A. Explorations have been continued from the time that the lease was taken. The lessor had the right under the lease, to continue explorations until the properties were thoroughly explored.

Q. What was the purpose of the Steel Corporation in taking that lease?

Mr. Dickinson: I object to that as incompetent and irrelevant.

By Mr. Reed:

Q. You may answer, please.

A. To secure additional ore reserves, ore supply.

Q. As to the Canisteo lease, when was that taken?

A. January 1, 1905.

Q. What was the indicated tonnage of ore on those properties when that lease was taken? Of course I speak only of available tonnage.

A. The Canisteo lease was supposed to have approximately 7,000,000 tons of merchantable shipping ore, direct ore, and about 70,000,000 of ore material, some of which could be made available by washing and some of it could not.

Q. Did that lease contain any Bessemer tonnage?

A. Some of it did.

Q. How about the concentrates? Were they Bessemer or non-Bessemer.

A. Some of them were Bessemer and some were non-Bessemer.

Q. What was the purpose of taking that lease?

Mr. Dickinson: Objected to as incompetent and irrelevant.

The Witness: To secure additional ore supply.

By Mr. Reed:

Q. There has been some evidence here, Mr. Olcott, about

options in the Cuyuna range, taken by the Steel Corporation about 1906. Are you familiar with those options?

A. I was.

Q. I wish you would tell us when they were taken?

A. In the latter part of 1905 and the early part of 1906. We took about seventeen options on the Cuyuna range.

Q. How many forties did those cover?

A. About 61 forties.

Q. During the time those options were in force, did you do any drilling?

A. We did.

Q. How many drill holes did you put in?

A. Approximately 100.

Q. Did you find any ore?

A. We did.

Q. Of what quality; Bessemer or non-Bessemer?

A. Non-Bessemer.

Q. Did you find any Bessemer?

A. Very little.

Q. What did you do with those options?

A. We gave them up. Some of them we gave up in the summer of 1906, and early in 1907 we gave up the balance.

Q. If ore was developed on the lands or some of the lands covered by those options, why did you give them up?

MR. DICKINSON: Objected to as incompetent and irrelevant.

THE WITNESS: At the time we were looking for an additional supply of Bessemer ores, and when we found that the ores developed by our explorations were practically all non-Bessemer, we had no object in keeping them or going on with the operations, as we already had a very large tonnage of non-Bessemer ores under lease.

Q. Now, just at that point, Mr. Olcott, I wish you would describe the condition of the ore reserves of the Steel Corporation as to Bessemer and non-Bessemer ores. Of which have you the largest tonnage?

A. Non-Bessemer.

Q. Has that been so right along?

A. The tonnage of non-Bessemer ore that was available, opened up, has been in excess of the Bessemer ore since the Corporation was formed.

Q. In 1901 what percentage of the Corporation's shipments from the Lake Superior district were of Bessemer ore?

A. Seventy per cent.

Q. At the present time what percentage of the shipments from that district are Bessemer ore?

A. A little less than 50.

Q. You are speaking of the Corporation's shipments alone?

A. Yes.

Q. I suppose the quality of the ore that is sent down by you depends upon the demands of the furnaces; that is, you send down what your furnaces tell you they need?

A. Yes.

Q. So far as you are able?

A. Yes.

Q. Has it been easy or difficult to keep up with the furnace requirements of Bessemer ore?

A. It has been more difficult each subsequent year to secure the requirements of Bessemer ore.

Q. Then in these new leases that you have taken from time to time, and the new explorations that you have conducted, for what kind of ore were you looking primarily?

MR. DICKINSON: That is objected to because the question does not specify what leases or at what time the question refers to.

THE WITNESS: We were looking at all times for additional supplies of Bessemer ore.

By MR. REED:

Q. How do the Steel Corporation's requirements of Bessemer ore compare in proportion with the requirements of those steel companies that have been built up in the last ten years?

MR. DICKINSON: That is objected to because the witness has not shown that he has information which qualifies him to answer this question.

THE WITNESS: All of the furnaces and steel plants that have been built of recent years, more recent years, are open hearth plants and do not require the Bessemer ores; whereas many of our plants were built years ago and are Bessemer plants, and we have to keep operating them and furnishing Bessemer ore, and I understand that even with the additional open hearth plants we have some Bessemer plants that are out of use because we can not supply them with the Bessemer ore.

By MR. REED:

Q. You have been with the Oliver Company, I think you said, since 1901?

A. Since 1901, yes.

Q. During that time have you ever known it or any of its subsidiaries to take a lease for any other purpose than the filling of its furnace requirements?

MR. DICKINSON: Objected to as irrelevant and incompetent.

THE WITNESS: I have not.

By MR. REED:

Q. Is it a part of your duty to recommend new acquisitions of ore lands?

A. It is.

Q. I suppose you are on the lookout always for suitable properties?

A. We are.

Q. Have you ever made any recommendations of additional ore land purchases that have not been acted on or have been acted upon adversely by the New York officers of the Corporation?

MR. DICKINSON: Objected to as incompetent.

THE WITNESS: I have.

By MR. REED:

Q. Have you prepared any list of the properties which have been submitted to you or to the Steel Corporation, and have not been taken over, either by lease or purchase?

A. I have.

MR. DICKINSON: Does this show what has been taken over or what has not?

MR. REED: Properties offered and not taken.

(Here a paper was marked "Defendants' Exhibit No. 101.")

By MR. REED:

Q. I show you Defendants' Exhibit 101, and ask you what that is?

A. That is a detailed statement showing a list of Mesabi range properties containing ore that were offered to various companies subsidiary to the United States Steel Corporation that were rejected.

Q. By whom was that statement prepared?

A. It was prepared under my direction.

Q. It is correct?

A. It is, to the best of my knowledge.

Q. Did you include in it all the offers of property of which you have any records?

A. This covers a list of all the properties of which we have a record in our office.

Q. Is it shown in that statement whether any of the properties offered and rejected were subsequently included in the Hill lease?

A. It is.

Q. Where are those to be found?

A. At the bottom of the last page.

Q. That is page 4 of the statement?

A. Yes.

MR. REED: We offer Defendants' Exhibit 101 in evidence.

MR. DICKINSON: That is excepted to as incompetent and irrelevant, and as secondary evidence, based upon records which are not themselves produced and based upon agreements such as options, contracts and correspondence, which are primary evidence of what was done in respect to the particular matters referred to, which are not produced; on those grounds it is excepted to as incompetent.

(The paper referred to was thereupon marked "Defend-

ants' Exhibit (Olcott) No. 101, October 6, 1913," and will be found in the volume of exhibits.)

By MR. REED:

Q. Does the Steel Corporation own any ore lands on the Cuyuna range?

A. No, sir.

Q. The intimation has been made in the cross examination of certain witnesses that have preceded you that there might be Steel Corporation ownerships there which are undisclosed; would you know of any such ownerships if any such existed?

MR. DICKINSON: That is objected to as irrelevant and incompetent.

THE WITNESS: I think I would.

By MR. REED:

Q. Does your company, the Oliver Company, have charge of all the Steel Corporation ore properties in the Lake Superior District, or only a part of them?

A. It covers all the properties in the Lake Superior district.

Q. And you are the chief executive officer of the company, are you?

A. I am.

Q. Does the Steel Corporation or any of its subsidiaries, directly or indirectly, openly or secretly, control or own any interest in any property on the Cuyuna range?

MR. DICKINSON: That is objected to on the ground that the witness has not qualified himself to answer this question, or to show that he is in the councils of the Steel Corporation, or has anything to do other than with the administration of the properties which they have actually acquired and publicly own.

THE WITNESS: Not the least.

By MR. REED:

Q. In 1907 what was your office in the Oliver Company, Mr. Olcott? Vice-president, was it not?

A. I think it was vice-president; yes, sir.

Q. And what was the condition of the Hill lands at the time they were leased as to their being opened and developed?

A. The only property that they had developed at all was the Leonard mine, and that was only in a small way.

Q. Had the properties been drilled to any extent?

A. There had been considerable drilling, but it was not done in a very thorough way or very complete.

Q. Was it possible to make a definite estimate of the contents of the Hill lands at the point to which the drilling had then proceeded?

A. It was not.

Q. Were any rough estimates made of the ore tonnage on those lands at that time?

A. I believe so.

Q. Do you remember any made in your office?

A. I remember some made in Mr. Sebenius' office; our engineer's office.

Q. That was under your direction?

A. Yes, sir.

Q. He was one of your subordinates?

A. One of our subordinates.

Q. The Government has put in evidence in this case an estimate, apparently made by Mr. Sebenius in February, 1907, showing 175,000,000 tons estimated or guessed at in the Hill properties. Is that the one of which you speak?

A. It is.

Q. What kind of ore were you looking for from those properties?

A. Well, we were looking for good grades of merchantable ore, but we were more desirous of Bessemer ore than non-Bessemer.

Q. After you took the lease, did you proceed with the explorations?

A. We did. We began explorations early in 1907, and continued those explorations until some time in 1912. We explored 672 forties in that time; 620 forties.

Q. Six hundred and twenty?

A. There were 672 explorable forties covered by the Hill lease. We explored about 620.

Q. What success had you in developing Bessemer ores?

A. When our explorations were completed, they showed somewhere between 25 and 30 per cent. of Bessemer ores.

MR. DICKINSON: Thirty per cent. of what does he mean?

THE WITNESS: Thirty per cent. of the total tonnage disclosed by the explorations under the Hill lands.

By MR. DICKINSON:

Q. And what was that total tonnage?

MR. REED: I think you have already had it in evidence, Judge.

MR. COLTON: There are several estimates.

THE WITNESS: It depends on the basis of the estimates; whether you take the estimates as made by the tax commission or whether you take an estimate based upon the tonnage of 49 per cent. and upwards.

By MR. REED:

Q. Well, let us consider the kind of ore that is assessed by the tax commission, because that has been the basis on which——

MR. DICKINSON: (Interposing) I wanted to get what he meant by 30 per cent.

By MR. REED:

Q. (Continuing) Let us just consider the kind of ore that is assessed by the tax commission, Mr. Olcott, because that has been the basis on which we have been measuring all of these Mesabi properties.

A. Yes, sir.

Q. Have the results of your explorations of those lands been made known to the tax commission from time to time?

MR. DICKINSON: I want to enter an objection to the statement that the estimate of the Tax Commission is the basis upon which we have been entirely proceeding in estimating these properties.

MR. REED: Very well.

MR. DICKINSON: It has been one element, but I do not care to assent to that.

MR. REED: Will you repeat my question.

(The question was read by the stenographer.)

THE WITNESS: They have.

By MR. REED:

Q. What is the tonnage of ore estimated by the tax commission on the Hill lands?

MR. DICKINSON: Now, what year do you mean?

MR. REED: In the last estimate they have made.

THE WITNESS: As I recall, it is about 216,000,000 tons.

By MR. REED:

Q. And when was that estimate made, Mr. Olcott?

A. 1912.

MR. DICKINSON: How many millions was that?

THE WITNESS: 216,000,000, I think it is.

MR. DICKINSON: Did you say anything about the grade of ore?

THE WITNESS: I did not.

By MR. REED:

Q. Now, in view of the fact that so large a percentage of the Steel Corporation's furnace requirements were for Bessemer ore, were the Hill ores as developed as advantageous for the Steel Corporation as they would have been for any other company?

A. They were not.

Q. In 1907, Mr. Olcott, what percentage of the requirements of the Steel Corporation's furnaces was Bessemer ore?

MR. DICKINSON: I object to that as the witness has not shown his familiarity with the operations of the company in that respect.

THE WITNESS: Something over 50 per cent.

By MR. REED:

Q. In 1911 what percentage of the requirements of the Steel Corporation's furnaces was for Bessemer ore?

A. About the same; about 50 per cent.

(Here a paper was marked "Defendants' Exhibit 102.")

By Mr. Reed:

Q. I show you Defendants' Exhibit No. 102, and ask you what that is.

A. This is a detailed statement showing iron ore properties in the Lake Superior district belonging to the United States Steel Corporation, showing the date of acquisition and the tonnages as of January 1, 1912, subdivided so as to show the properties acquired prior to April 1, 1901; and section two to show the properties acquired subsequently thereto.

Q. Under whose direction was that statement prepared?

A. Under my direction.

Q. Have you checked it?

A. I have checked it in a general way by the totals and general figures.

Q. What is the source of the information stated in that statement as to tonnages?

A. These figures are based upon the report of the Minnesota Tax Commission for 1912 as to tonnages in Minnesota and upon the report made by Mr. Finlay in 1911 for the Michigan Tax Commission in Michigan.

Q. Those are the figures in Michigan that have already been proved by the Government in this case, are they not?

A. As I understand, yes.

Q. And in Wisconsin? Have you any ores in Wisconsin?

A. Very few; a small tonnage.

Q. What figures have you used for those tonnages in Wisconsin?

A. Data in the Tax Commissioner's office of Wisconsin.

Q. That is, the Wisconsin assessments?

A. Yes, sir.

Q. Have you divided these properties among the different ranges?

A. They are divided to show the tonnage in each property, the description and tonnage and date acquired are under the headings of the ranges.

Q. Where did you get the figures of shipments that appear in that statement?

A. They are taken from our own records of our own shipments.

Q. I notice the statement contains dates of acquisition of the different properties?

A. Yes, sir.

Q. Have you any explanation to make with regard to those dates of acquisition?

A. They show the dates when many of these properties were acquired by some company previous to the organization of the Steel Corporation.

Q. Suppose the Oliver Iron Mining Company had acquired a lease in 1892 and had sold it to the Lake Superior Consolidated Iron Mines in 1894, which date would appear in that statement?

A. I think the latter date would appear in that, although it was owned by the Steel Corporation or a subsidiary previous thereto. The date shown is when the transfer was made from one company to another.

Q. Suppose the properties were acquired subsequent to 1901, then what appears in the statement?

A. It would show on the second section.

Q. And that shows the date of original acquisition by the Steel Corporation?

A. Yes, sir; and subsequent to April 1, 1901.

Mr. Reed: We offer in evidence Defendants' Exhibit No. 102.

Mr. Dickinson: This is objected to as incompetent for the reason that the witness has not shown sufficiently that he is competent to testify as to the facts therein set forth; further, because it is based upon evidence which shows that it itself is secondary, the original documents upon which it is based not being produced in evidence; and further, because a part of it is shown to be taken from public records, and it has not been shown that the witness himself examined these public records.

(The statement referred to was thereupon marked "Defendants' Exhibit (Olcott) No. 102, October 6, 1913," and will be found in the volume of exhibits.)

By Mr. Reed:

Q. These estimates are not offered as your individual judgment of the properties, are they?

A. Not at all; just a compilation.

Q. A compilation of official records?

A. That is all.

Q. For convenience?

A. For convenience.

(Here a paper was marked "Defendants' Exhibit No. 103.)

By Mr. Reed:

Q. I show you now Defendants' Exhibit No. 103, and ask you what that is?

A. This is a statement prepared under my instructions to show:

(a) Tonnages shipped from the Lake Superior district for the years 1907 to 1911, inclusive, by the United States Steel Corporation and by other interests.

(b) Average yearly shipment for the period 1907 to 1911, inclusive.

(c) Ore reserves as of January 1, 1912.

(d) The period of years which such ores will last on above basis of shipments.

Q. What is the source of your information, as to ore reserves as given in that statement?

A. In Michigan they are taken from the reports of Mr. Finlay for the Michigan Tax Commission in 1911.

Q. That is the statement already in evidence, is it?

A. It is already in evidence for the old ranges, the Michigan ranges; and for Minnesota it is taken from the Minnesota Tax Commission tax report for 1912.

Q. And for Wisconsin?

A. It is taken from data in the office of the Wisconsin Tax Commission.

Q. You mean assessments in the office of the Wisconsin Tax Commission?

A. Assessments, yes.

Q. What is the source of your information as to shipments, Mr. Olcott?

A. As to our own shipments, it is taken from our own actual records, and for the outside interests, it is taken from the reports published yearly by the Iron Trade Review.

Mr. Reed: I offer in evidence Defendants' Exhibit No. 103.

Mr. Dickinson: That is excepted to as incompetent and secondary, based upon primary evidence which is not produced to support it, and the witness is not sufficiently qualified to verify the facts therein set out, and because as to a part of it, according to the witness' own statement, it is hearsay.

(The paper referred to was thereupon marked "Defendants' Exhibit (Olcott), No. 103, October 6, 1913," and will be found in the volume of exhibits.)

(Here a paper was marked "Defendants' Exhibit No. 104.)

By Mr. Reed:

Q. I show you Defendants' Exhibit 104 and ask you what that is.

A. That is a statement showing the tonnages of merchantable iron ore for the Lake Superior district by ranges, January 1st, 1912, showing the holdings by tonnage and the percentage of the Steel Corporation and other interests.

Q. Under whose direction was that prepared?

A. That was made under my direction.

Q. What was your source of information as to the tonnages in the different ranges, taking first the Mesabi and the Vermillion ranges in Minnesota?

A. These figures were taken from the report of the Minnesota Tax Commission of 1912.

Q. As to the Michigan ranges what was your source of information?

A. They were taken from the report of Mr. Finlay in 1911 for the Michigan Tax Commission, and from the tax values in Wisconsin for the small tonnage that exists there.

Q. Now, about the Cuyuna tonnage; where did you get that?

A. The Cuyuna tonnage I took as the lowest estimate given by several of the witnesses during the last week. Mr. Zapffe estimated 417,000,000, Mr. Crosby, I believe, estimated 435,000,000, and Mr. Tripp made it 500,000,000. I took the lowest of those estimates.

Q. Is the Cuyuna range assessed in the last published report of the Minnesota Tax Commision?

A. It is not.

Q. So that there was nothing in their records available for the Cuyuna tonnage?

A. There was not.

MR. COLTON: He stated that Mr. Tripp had given the tonnage as several hundred million. I do not know whether his attention has been called to the fact that the commercial tonnage given by him was only 100,000,000.

MR. REED: Of course we will have to leave the record to speak for that. I think Mr. Tripp said 500,000,000. The record will show.

MR. COLTON: Of merchantable and available ore?

MR. LINDABURY: That was being worked.

By MR. REED:

Q. Mr. Olcott, how have you dealt with the Hill tonnages in making up this statement? Are the tonnages in the Hill lands classified among Steel Corporation reserves or others?

A. The only tonnage of Hill ores that is included in the Corporation is the tonnage that remains in the Hill properties that we are now operating.

Q. You have surrendered some of the Hill properties back to the Hill trustees, have you not?

A. Most of them, yes.

Q. Of course that tonnage is not included in the Steel Corporation?

A. Not included in the Steel Corporation, only the tonnage included in the properties that we now retain and which we are operating.

MR. REED: We offer in evidence Defendants' Exhibit No. 104.

MR. DICKINSON: I repeat the same objection which I made as to the last exhibit, and further on the ground that part of it is based upon the Minnesota Tax Report for 1912, which has not been produced in evidence.

MR. REED: I will state here that of course we expect to prove the Minnesota Tax Commission assessments for 1912 by witnesses to follow.

(The paper referred to was thereupon marked "Defendants' Exhibit (Olcott) No. 104, October 6, 1913," and will be found in the volume of exhibits.)

By MR. REED:

Q. Would the percentage of the Steel Corporation be materially altered if the Minnesota Tax Commission assessments of 1910 were used instead of 1912? I mean treating the Hill tonnages in the same way that you have treated them here?

A. It would be increased somewhat. I could not say how much.

Q. Would it be as much as one per cent.?

A. I would like to get that again. I am not quite sure what the question is.

Q. You have used the 1912 figures in making up this Exhibit 104, and I am curious to know why you selected 1912 instead of 1910?

A. I selected 1912 because it was the nearest we could get to the 1911 of Michigan.

Q. The nearest comparable to the Finlay report in Michigan; is that it?

A. Yes.

CROSS-EXAMINATION

By MR. DICKINSON:

Q. Have you ever made any estimate or can you give the difference in cost between operating a mine of iron ore 1,000 feet and another 2,000 feet?

A. It would depend upon a great many conditions.

Q. My question was not upon what conditions it depends, but was to ask you if you had made any actual estimate of the difference of operating mines at the depths stated.

A. I have not.

Q. Have you ever estimated the difference between the cost of operating an iron mine at 2,000 feet and one at 5,000 feet?

A. I have not.

Q. You stated that that would vary, according to many conditions. Would one of the conditions be the size of the operation?

A. It would.

Q. That would bear very materially upon it, would it not?

A. It would have something to do with it.

Q. You have an expensive plant, have you not, at the outside of the shaft?

A. Certainly.

Q. Then the cost per ton would be less, distributed over a large output, than over a small output, would it not?

A. That is evident.

Q. That would vary according to the extent of the operation, the number of chambers, the character of ore, and the value of that ore in the market, would it not?

A. So far as the hoisting is concerned, yes.

Q. When you speak of ore being mined at a level of 5,000 feet, and the difference between that and the levels at which they are now operating not constituting such a difference as would make that ore non-competitive, what do you mean by non-competitive in the sense in which you make that statement?

A. Would you let me go on and answer that proposition in my own way?

Q. Why, surely.

Mr. Reed: That is just what Judge Dickinson wants, Mr. Olcott.

Mr. Dickinson: Provided, of course, you answer the question, and any explanations, of course, you may make afterward.

THE WITNESS: All of these questions of estimates of operating properties are comparative. I have in mind that in the early days of opening up the Marquette range, back in the sixties, they started those mines by taking off a small amount of surface, and they took the ore out with horses and carts. They had large Norman horses with two-wheeled carts, and backed them down into the mine, and loaded them up, and they took it up to a small dock and put it into small ore carts carrying six or seven tons. As the operations got a little lower down, so that the horses could not pull it out, they put in derricks and hoisted it out with a bucket for 100 feet or more; loaded that into carts and put it into the wagons; and as the operations got still deeper, they put in small hoists, going down three or four hundred feet. As increased depths were obtained they put in larger machinery to hoist it from a depth of a thousand feet. As time went on the operations on a number of ranges have gone to two thousand feet, with larger machinery and larger loads, and in the copper country to-day they are hoising in shafts down to a depth of 8,100 feet with ten ton loads, all of which tends to show, as a matter of conditions and the changing of times, that as the depth increases you have got to put in larger machinery and more economical equipment. But I say that the increased depth—going to a greater depth is not prohibitive, because with the skill in engineering and in the manufacture of machinery, you can hoist from 6,000 feet practically as rapidly for the whole distance as we hoist to-day in the iron ranges from a depth of 1,000 or 1,500 feet. For instance, in the copper country, with a large hoist, 28 feet in diameter, they have hoisted from a depth of a mile in 55 seconds; so that as I looked at it, the question of depth is not prohibitive, if you have the tonnage to warrant mining it, and if you put in adequate machinery.

By MR. DICKINSON:

Q. Do you use the word "prohibitive" in the same sense as the word "non-competitive"?

A. Yes, sir.

Q. That is to say, that the difference would not actually keep it out of the market?

A. No, sir. I think that merely the increase in depth simply increases one of the items in the cost of mining.

Q. But you do not mean to say that a concern that had to mine entirely at 5,000 feet depth could go into the market with the same profit and meet a concern that took its ores out of drifts or by removing the overburden?

A. When these deposits get down to 5,000 feet in depth, most of them or a good many of them will be down there. It will not be a question of one man being down 5,000 feet and the others on top.

Q. So you are really speaking of those who are entering into the market under substantially the same conditions; that all of them would be 5,000 deep?

A. A good many of them would be; not all of them.

Q. Not all of them?

A. Yes.

Q. But when you spoke of the question of competition or non-competition, it was with reference to those who are at a great depth, was it?

A. Well, some mines would be deeper than others. I do not get your point.

Q. In speaking of the proposition that it would not be sufficient to render that ore non-competitive, you were speaking of ores in competition with each other, that were in depths ranging from 2,000 to 5,000 feet?

A. Not necessarily. I think they might compete with people working nearer the surface. I mean to say that I do not think mere depth would prevent a person from putting iron ore on the market.

Q. Do you mean to say that all other things being equal—the iron content, the percentage of phosphorus and the output—that a mine 5,000 feet deep could put its ore on the market and sell it with the same profit that ore could be sold for, taken out by dippers from the Mesabi region?

A. I did not say any such thing.

Q. And you did not mean to say any such thing?

A. I did not say they could get the same profit, but they might get some profit.

Q. Some profit?

A. Yes.

Q. Have you ever estimated what the profit would be in either case, or what the differential would be, and if so, what data did you take as a basis for that calculation?

A. Your question is not definite enough for me to make any answer.

Q. Well, I just wanted to know what estimate or calculation you made, if any, when you said that the increased cost of raising from a 5,000-foot level would not be sufficient to render the ore so raised non-competitive?

A. I can say in answer to that that it costs just about a cent a ton to hoist ore from our underground mines on the Mesabi range. It costs us from five to seven and nine cents for hoisting on some of the deeper, older ranges.

Q. What does it cost on the Mesabi range to take it out with dredges?

A. It depends entirely on the property.

Q. Where the overburden is taken off?

A. Well, each property varies.

Q. Take the Hull-Rust Mine.

A. That varies at different times.

Q. Well, can you not give me the extremes, the maximum and minimum now of the Hull-Rust Mine?

A. It depends entirely what you include in cost; whether you are simply going to load the ore into cars with a dipper, or whether you include all your mining costs.

Q. What were you talking about when you spoke of the cost not rendering them non-competitive? I want to find out what you were talking about.

A. I was talking of the total cost, delivered at Lake Erie.

MR. REED: Would you include the cost of stripping in that, Mr. Olcott?

THE WITNESS: I would. Everything would go into my mining cost.

By MR. DICKINSON:

Q. Do you mean to say that where the iron content and phosphorus were the same, and the amount of iron taken out

was the same, that now or within the near future ore could be taken out from a depth of 5,000 feet and be sold in the market in competition with ore taken from the Mesabi region, where the overburden is taken off, estimating the cost of the overburden and everything, and meet that ore in the market in competition?

A. If they had as good ore, and sufficient tonnage, I think they could sell ore in the market at a profit, but it would not probably be as great as they would get from such a mine as the Hull-Rust. I do not say the profits would be the same.

Q. How would it be as contrasted generally with ores of the same quality that are not taken out of shafts, but are taken out where the overburden has been taken off?

A. The cost would be higher, of course.

Q. The cost would be higher?

A. Yes.

Q. Do you know what the difference would be?

A. It depends entirely on the property.

Q. It depends entirely on the property?

A. Yes. And the conditions.

Q. Mr. Olcott, has your experience had anything to do with the sale of ores on the market?

A. Yes, sir.

Q. Does your company sell ores since you have been vice-president of it?

A. We sell them to our constituent companies.

Q. To your constituent companies?

A. Yes.

Q. Do you sell them in the market in competition with people who sell them—in the open market?

A. We do not.

Q. Well, have you had any experience in the sale of ores within recent years?

A. Not within recent years.

Q. When did you have any experience in selling ores in the open market to people other than your constituents?

A. No experience in the actual selling of ores, no sir.

Q. Have your official duties in any way brought you in

direct responsibility for the selling of ores at any time since you have been in the iron business?

A. No, sir.

Q. Do you know the price in 1907 of old range Bessemer ores at lower Lake ports?

A. I cannot remember it. I could verify your figures there, probably.

Q. Can you, from memory, approximate it?

A. I could not say what they were in 1907.

Q. How about the Mesabi Bessemer ores?

A. I do not carry those figures in my mind.

Q. Could you give any approximate figures as to the prices of any of the ores from any of the ranges on the Lake at Lake ports?

A. I can say that the prices of old range Bessemer ores have varied from about $3.50 to $5 a ton during the last twelve years. I have no object in keeping the prices of particular ores for particular years in my mind. The figures are available of record and anybody can go and get them at any time they want to.

MR. DICKINSON: We offer in evidence this table on page 23 of the pamphlet entitled "The Production of Iron Ore, Pig Iron and Steel in 1912, United States Geological Survey."

MR. REED: I thought you had closed your case, Judge.

MR. DICKINSON: I offer it in connection with this examination.

MR. REED: You reopen it now?

MR. DICKINSON: No. You may make any objection you wish.

MR. REED: I object to this offer as being out of place and improper in view of the fact that the Government has closed its case; also as a self-serving statement made by the complainant after this action was instituted.

MR. DICKINSON: We will exclude the year 1913.

MR. SEVERANCE: You say it was published in 1912?

MR. COLTON: In 1913.

MR. SEVERANCE: That is worse yet.

Mr. Dickinson: It contains the year 1913, and we will exclude that.

Mr. Reed: Will you exclude everything that was published, then, in 1913?

Mr. Dickinson: No; just that part of the table which includes the year 1913. We will just exclude that from our offer.

Mr. Severance: It is admitted that the document was published in 1913, two years after the suit was brought?

Mr. Dickinson: Yes.

Mr. Severance: Two years after the suit was brought by the complainant in this case.

Mr. Reed: I desire to add to my objection a further objection to the offer of a part of this pamphlet without the offer of the whole pamphlet.

(The table referred to was thereupon marked "Government Exhibit (Olcott) No. 436, October 6, 1913," and will be found in the volume of exhibits.)

By Mr. Dickinson:

Q. If a new iron and steel concern were to be started with a portion of their properties acquired and a portion yet to be acquired, and contemplated running for fifty years, what proportion of these properties, in speaking of such a new concern, did you estimate should be acquired now, to justify its starting, relying upon the market for the balance; a million and a half tons a year being the consumption?

A. I did not make any definite statement of the amount to acquire at the present time. That would vary upon the opinion of different operators. One man might prefer to put his money into plant, and rely upon getting his ore reserves in the open market. Another man might prefer to get fifty per cent., another seventy-five per cent. of ore reserves. It would depend upon the man. In my opinion it would be advisable for anybody entering into a new operation of a steel plant to get from 60 to 70 per cent. of their ore reserves, if they could, as a matter of insurance. Some people would rather have all of their ore reserves. Others would take part. It depends upon the amount of money they have got avail-

able for their operations; it depends upon the opinion of the management.

Q. There is no fixed, settled theory on that? It depends upon various conditions and circumstances and the views of the different operators, does it not?

A. Upon the opinion of the different people, yes. It is a matter of judgment and insurance.

Q. In the hypothetical case with respect to which you answered, 75,000,000 tons for the 50 years that were contemplated, approximately how much cash did you consider would be necessary as a bonus in securing ore property containing 75,000,000 tons?

A. It might not take any bonus.

Q. It might be altogether on leases?

A. Yes, sir.

Q. When you were considering this question in your answer, did you base your answer upon operations based upon leases, or actual purchase of the ore in the ground?

A. I did not base it on anything particularly. I figured that I would go out in the market and negotiate. It would depend upon the result of the negotiations. Some I might buy in fee, and some lease.

Q. So you did not have any particular definite plan in mind?

A. I had the plan in mind, but I did not have any ratio as to how this thing was going to work out in detail.

Q. You evidently had not determined whether a part of that would be acquired in fee or a part in lease, or all in fee or all in lease?

A. It would depend on how negotiations developed.

Q. Mr. Olcott, what purchases have you made when you carried on the negotiations, I mean of ore properties, or what leases have you made for ore properties in the Lake Superior district within the last two years? Just state what they were.

A. I have not made any particularly in the last two or three years.

Q. Well, within the last three years.

A. We have made——

Q. (Interposing) Please do not say "we." I want to confine it to what you have done personally.

A. You mean for my personal benefit or the company I represent?

Q. No, I mean where you were the person who did the thing that was done.

A. If I may refer to this statement showing properties we have acquired since 1901?

Q. Which one?

A. The statement that is in evidence here, showing properties acquired since 1901, will give that.

MR. DICKINSON: Very well, you may do that.

By MR. DICKINSON:

Q. You understand my question refers to within the last three years.

MR. REED: There is no objection to his refreshing his recollection?

MR. DICKINSON: No, he can do that. My question, you understand, only goes back three years.

THE WITNESS: We acquired in December, 1910, an interest in the Walker lands. Those are the principal acquisitions, I think, in the last three years.

Q. Were those lands purchased outright, or taken on lease?

A. Purchased in fee.

Q. What was the extent of ore reserve there?

A. Well, it itemizes them here. I can add them up. I would have to add these.

MR. REED: You mean at the date of acquisition, Judge?

MR. DICKINSON: Yes; of what was estimated.

THE WITNESS: Oh, something over twenty million tons.

By MR. DICKINSON:

Q. What was the cost of that ore?

A. I do not remember. I would have to refer to our records.

Q. Did you negotiate that purchase?

A. I was in the negotiations.

Q. In the negotiations?

A. Yes; I had negotiations with Mr. Walker.

Q. Have you negotiated for any ore or lease acquired since that time? I mean of any ore property acquired either in fee or by lease since that time.

A. To my recollection, not anything of any importance.

Q. I asked you about where you acted officially. Now I will ask you where you acted on your own account. Have you made any leases or purchases on your own account within that time?

A. Personally?

Q. Yes.

A. No, sir.

Q. Then you have not had any actual negotiations since that time that have resulted in any sale or lease?

A. No.

Q. Since 1910?

A. No.

Q. Whatever you know, then, in regard to any transfers, either by lease or sale since that time, is hearsay, is it not?

MR. REED: That is not necessarily the conclusion, is it?

MR. DICKINSON: Well, I am asking him whether it is.

MR. REED: Do you expect him to be lawyer enough to know what is hearsay and what is not?

MR. DICKINSON: I think he is smart enough to know that.

MR. REED: He may be a witness to it——

MR. DICKINSON: I think he is smart enough to know that.

MR. REED: I object to it.

THE WITNESS: Ninety per cent. of our information technically is hearsay.

By MR. DICKINSON:

Q. You know what hearsay is, do you not?

A. I know what I call hearsay; I do not know what your idea is in asking the question. It is general knowledge.

Q. No, I mean that in the sense of where you acquired the information other than from your actual contact with the matter, the particular thing itself.

A. I have not had any contact with any negotiations for sales.

Q. Do you know of any property, that you know yourself, as being offered on the market in the Lake Superior region for sale or lease? I mean knowing the owner of the property and the iron content and phosphorus content, at the present time, and the prices at which it was offered. If so, state what it is.

A. I know of properties that have been taken within a year on the older ranges for royalties from thirty cents upwards, of the character that you refer to.

Q. What was the iron content of those?

A. Very high grades, such as prevail on the Gogebic range.

Q. What do you call high grade?

A. Ore running 60 per cent. in dry iron.

Q. And the royalties have been taken as low as 30 cents?

A. Thirty cents.

Q. What was the cost of mining that ore that you referred to, as compared with that on the Mesabi, generally speaking; higher or lower?

A. You mean for underground operations?

Q. I mean that particular property that you spoke of.

A. What would I compare it with? An underground mine on the Mesabi, or an open pit?

Q. An open pit.

A. Why, it would cost more than it would from an open pit.

MR. REED: How about an underground Mesabi?

By MR. DICKINSON:

Q. Yes, how about an underground Mesabi?

A. I do not think it would cost any more than it would from an underground Mesabi mine.

Q. Is this mine that you spoke of developed?

A. It is developed by drilling, and they have found a very large tonnage and are now sinking a shaft on it, and a part of it will be worked open pit.

Q. At that time no shaft had been sunk; at the time of this sale?

A. At the time they took the option there was not any shaft sunk.

Q. Now, when you were speaking of this hypothetical case of a million and a half of tons for fifty years, what practical average grade of ore were you contemplating?

A. I was figuring a merchantable grade of ore, depending upon the range and the locality in which it was found.

Q. Can you specify, other than you have, any such ore as ore that you figured on as being for sale or lease?

A. You mean that you want me to specify the particular ores that I was going to buy, or a particular mine that I was going to buy?

Q. I want you to specify the properties that you had in mind, if any, and the properties and the price, that you knew could be acquired.

A. I haven't any options on any properties; I know from my knowledge of the Lake Superior district and the various properties that are developed and undoubtedly for sale, that I would not have any difficulty in the Lake Superior region, taking all the ranges, in going out in a reasonable time and acquiring a reserve that would afford a million and a half tons a year of good merchantable ore, and the particular places I would acquire that would depend upon the result of my negotiations.

Q. Have any such properties been offered to you, or have you had any direct contact with negotiations for the lease of such properties within the last six months?

A. I have not.

Q. What average royalty would you expect to pay?

A. Somewhere from thirty to eighty-five cents a ton, depending upon the ore and the mine and various conditions.

Q. Is that as near as you can come to it, thirty or eighty-five cents?

A. That is the range of prevailing royalties at the present time. I would go into the market on the same basis as other people are buying on.

Q. And you do not know what proportion you would have to pay, either one way or the other?

A. I could not tell until I am through.

Q. Do you mean to say that the cost of underground mining on the Mesabi is practically the same as it is on the old range?

A. I did not say that; I said that this particular property that I referred to on the Gogebic, on account of conditions that I know exist, the cost there in my opinion would be practically the same as it is on the Mesabi.

Q. And it was as to that particular piece that you answered?

A. That is the one, yes.

Q. When were you on the property of Palms and Anvil?

A. Last year.

Q. What time last year?

A. Last summer; I don't remember the exact date, but last summer.

Q. You mean this last summer, or a year ago?

A. A year ago.

Q. To what extent at that time had they sunk their shaft?

A. I think it was about 1,400 feet.

Q. At that time?

A. Yes.

Q. Have you been there since?

A. I have been on the property since.

Q. When?

A. I was there this last summer; this present summer.

Q. This past summer?

A. Yes, sir. My information that I got as to the Palms mine was based on maps that were shown to me by the general superintendent of the property.

Q. So when you answered with regard to that, you based it on information?

A. On the actual maps owned by the company.

Q. Yes.

A. In the office of their company.

MR. DICKINSON: This is excepted to as being secondary and hearsay, the maps themselves being the best evidence; and his answer on direct examination, where he says:

"Yes, that is on the Gogebic range. They have shown up

an ore body there of over 2,000 feet long, and in places it has averaged over 125 feet in width, and they have shown that ore to extend at least 300 feet high."

This is objected to on the same ground.

By Mr. Dickinson:

Q. What analysis, if any, did you make of that ore?

A. I am not making any analyses.

Q. Then you did not make any?

A. I did not make any analysis. It was not my property.

Q. What do you know about it?

A. I know what the general superintendent, the man who is managing it told me, and he told me the ore ran over 60 per cent. in iron, and that in all their openings they developed 2,000 feet long and 300 feet high, and in all their cross cuts they had not found a piece of rock as big as your fist.

Q. And your answer was based on that sort of information?

A. Yes, and I consider it a very accurate source of information.

Mr. Dickinson: That is objected to as hearsay, the previous answer also being objected to, on direct examination.

By Mr. Dickinson:

Q. What do you know about the property of Mr. A. B. Coates being on the market?

A. I know that his property is immediately adjoining the property that is controlled by M. A. Hanna & Company south of Wakefield. I know that they have found a considerable tonnage on that property, which is an extension of the ore deposit of the Hanna lands.

Q. What do you know about his offering the property for sale or its being for sale?

A. I know that Mr. Coates is an independent operator and his business has been picking up properties and developing them and selling them, for the last seven or eight years or more.

Q. When did he sell the last piece, that you know of?

A. I do not know when he sold it. I have not any record

of it. I know he is operating one or two mines on the Mesabi range.

Q. Do you know of any sales made by him recently?

A. I do not.

Q. Have you any knowledge yourself of his properties being for sale, or that they could easily be purchased?

A. That is my opinion. I have not tried to buy any properties from him.

Q. On what do you base that opinion?

A. That is my general opinion.

Q. Your general opinion?

A. Yes.

Q. And you do not know anything about whether it could really be purchased or not?

A. I am not absolutely certain, but I feel very positive.

MR. REED: Judge Dickinson asked you upon what you based your opinion. You evidently did not understand him.

MR. DICKINSON: I will ask that question again.

By MR. DICKINSON:

Q. You say you are very well satisfied. What satisfies you?

A. The fact that these people are finding and developing properties to make money out of them by either operating them themselves or selling them.

Q. But you do not know which properties they propose to operate and which they propose to sell?

A. No, it depends on conditions.

Q. And sometimes they do one and sometimes the other?

A. Yes, I think they do; sometimes they operate them and sometimes they sell them, but they are willing to sell generally, at a price.

Q. But you do not know of any sales made by Mr. Coates recently?

A. Not recently; no, sir.

Q. Now, what information have you in regard to Mr. Schlessinger having sunk a shaft to a depth of 1,200 feet? What is the source of your information on that? Were you ever in the shaft?

A. I have been at the shaft.

Q. At the shaft?

A. Yes.

Q. Have you been down in the shaft?

A. I have not been down it.

Q. What you know about it is what other people have told you?

A. What the manager told me himself.

Q. You saw the opening yourself?

A. I saw the shaft, yes.

Q. How far down could you see into the shaft at the top?

A. Well, you could see a few hundred feet, I suppose.

Q. How far down—do you recollect how far down you saw?

A. No, I do not.

Q. Then, what you know about that is what miners told you?

A. No, not miners; the manager of the mine.

Q. What the manager of the mine told you?

A. And he ought to know, if anybody.

Q. Yes, but unfortunately he is not here.

A. Well, we can get him here if it is necessary.

Q. You said Schlessinger had found ore at a depth of 12 to 14 hundred feet?

A. Yes.

Q. How did you get that information?

A. I got it from the manager, as I have just told you.

Q. And in no other way?

A. That is the only way I could get it, unless I went down in the mine myself.

Q. Yes, now how many mines on the Gogebic range that you know of have demonstrated that they have ore—how many mines other than Schlessinger's have demonstrated that they have ore at a depth of 12 to 14 hundred feet?

A. Oh, we have a number of mines of our own.

Q. On the Gogebic?

A. Yes.

Q. How many have you there?

A. Oh, we have a number of shafts that have gone down all the way from 1,400 to 2,100 feet in depth.

Q. How many shafts have you there that have gone down as much as 1,400 feet?

A. I did not know you would ask that question, but I happened to put it in my pocket.

MR. DICKINSON: I am going to ask you a lot of questions, and I do not propose to tell you what they are. I do not know what Mr. Reed is going to ask you.

MR. REED: Will you not let him finish his answer and not cut him off?

MR. DICKINSON: I assure you I did not cut him off intentionally.

MR. REED: I know you did not.

THE WITNESS: We have seven or eight shafts in the Ironwood district that go down from 1,200 to 2,000 feet in depth. We also have some shafts on the Wisconsin side, at the Atlantic mine, the Plummer mine, that go down about 1,800 feet.

By MR. DICKINSON:

Q. That is all in the Gogebic?

A. We have a shaft at the Tilden mine that goes down—two shafts that go down 14 to 18 hundred feet.

Q. That is all in the Gogebic, is it?

A. Yes.

Q. Now, excepting your shafts and the Schlessinger shafts, how many other shafts in that region do you know of, of your own knowledge, that have gone to a depth of 12 to 14 hundred feet?

A. Well, that is the average working depth in the Gogebic range to-day, Judge, of all operators.

Q. Of all operators?

A. Yes.

Q. You say you were more conservative twenty years ago than you are now?

A. I was on some things.

Q. On some things?

A. Yes.

Q. Is it not a fact that a great many geological theories

and anticipations and expectations as to mines and their development come out differently from the expectations, some exceeding and others falling short?

A. Possibly.

Q. Well, I am just asking you now from your knowledge and experience, is it not both ways?

A. A man's judgment and geological theories will vary in different years, depending upon what has been developed during that period.

Q. Do you not know of mining properties that have been acquired on the basis of the best geological experience and expert knowledge, that have turned out to contain much less ore than was expected?

A. I do not recall any.

Q. Do you know of any cases where, based upon the advice of experts, options have been taken upon property or properties have been acquired and a large amount of money has been expended in explorations, and it has disappointed the expectations and turned out to be money thrown away?

A. There may be a few individual cases, but in the majority of cases, most properties based upon accurate expert information, I think, have turned out pretty well.

Q. Can you name any case within your own knowledge where it has turned out contrary to expectations? I mean to say, where the result has been far short of what was expected?

A. I cannot.

Mr. Reed: Are you speaking of particular mines?

Mr. Dickinson: I am asking him. He says he cannot.

The Witness: I cannot recall any place where it has been especially disappointing, except we might say on the Baraboo——

Mr. Dickinson: I was going to ask you about the Baraboo district.

The Witness: I would like to say right there that I never favored going into the Baraboo district.

By Mr. Dickinson:

Q. Well, somebody did, did they not?

A. Possibly, but I am not the man.

Q. I am not trying to convict you of it.

A. Well, I cannot be convicted of it.

Q. But the Steel Corporation generally does not spend money without expert advice, does it?

A. Well, sometimes the experts, as you say, may make a mistake.

Q. Yes, and they did go there and spend a great deal of money, with a water hole, did they not?

A. Yes; they did.

Q. How much do you say they spent?

A. The report says a million dollars, but I do not think it was a million dollars. It was something over half a million dollars.

Q. When did they begin with that?

A. We have been working there three or four years.

Q. They began it then three or four years ago, did they?

A. Yes.

Q. You are not the only people that have been disappointed in that way, are you?

A. The International Harvester Company had a similar experience there.

Q. They are pretty smart people, too, are they not?

A. I do not know anything about that.

MR. REED: I do not think it was very clear, Judge, whether your question was limited to the Michigan ranges, or the old ranges, or whether it included the Mesabi.

MR. DICKINSON: What question?

MR. REED: As to whether Mr. Olcott had known of any disappointments on explorations. He has already testified to a couple in his direct examination, the Cuyuna and the Mesabi. I do not know whether you meant to include those ranges or not.

MR. DICKINSON: I do not want to involve him in anything that you might think is not clear.

By MR. DICKINSON:

Q. Did you have in mind only the Michigan ranges?

A. On the Mesabi a person takes very little chance up there, because the ore lies flat, and it is easily found with

drills, and after you have drilled it you can measure up very accurately the tonnage, and bank pretty well on getting out as much ore as you estimate.

Q. How about the Cuyuna range?

A. I am not familiar with the Cuyuna. I made no estimate on the Cuyuna.

MR. DICKINSON: Is that satisfactory, Mr. Reed? Does that cover your point sufficiently?

MR. REED: I think so. I did not want him to overlook the Hill ores; that is all. I understand from his explanation that he means estimates made after drillings are reliable.

By MR. DICKINSON:

Q. What portion of the Gogebic range is unexplored where you would expect, as the record here shows, to find "ungodly" deposits. Is that what you said?

MR. REED: What page is that?

MR. DICKINSON: Page 12105 of the typewritten testimony.

MR. REED: Page 12105 had better be corrected.

THE WITNESS: I do not remember using that word.

MR. DICKINSON: That is what the record shows.

MR. REED: "Undoubtedly" is probably the word.

THE WITNESS: Where you would undoubtedly find large deposits.

By MR. DICKINSON:

Q. I wanted to get you to define that word.

A. I might define it if I had said it.

Q. What experience have you personally had in sinking drill holes in the Iron River and Crystal Falls region recently?

A. We are doing some drilling now.

Q. How far have you gone?

A. We have been drilling for about six months in one of our mines there. We are now drilling in that region to find additional ore, except as to increased tonnage of properties we are working. We only operate at Iron River one mine, the Dober mine, and we are doing some drilling there.

Q. Where you spoke of drilling that had been done there from 1,000 to 1,500 feet, and according to your understanding,

that they were still under way, please state the basis of your understanding on that subject.

A. That information is stated in Mr. Finlay's report for 1911, where he was employed by the Michigan Tax Commission to value and estimate the mines in Michigan, and he states in his report that drill holes have gone down and found ore from 1,100 fully up to 1,700 feet.

Q. You were not undertaking to give that as your own knowledge?

A. No; I took it from his reports on record here.

Mr. Reed: That is the report that the Government put in evidence?

The Witness: The report on record, filed by the Government. Mr. Finlay had access to all their blue prints and information regarding their properties when he made up his estimates and his investigation.

By Mr. Dickinson:

Q. Is not Mr. Samuel Mather a director in the Cleveland Cliffs Company?

A. I do not know.

Q. You spoke of independent ore merchants having sufficient ore to equip a large steel company using from two million to two and a half million tons a year; and you were asked as to whether or not they were in any way controlled or owned by the Steel Corporation. Do you mean to say that your official position puts you in a position to know any interests, stock or otherwise, that the Steel Corporation may have in properties which have not been turned over to you or your company to operate?

A. I do not say that.

Q. And when you speak of these people being absolutely independent——

A. I say that to the best of my knowledge and belief.

Q. On what do you base that knowledge and belief? Do you know anything about it?

A. I think I probably would know something about it if they were not. It is not based upon any evidence.

Q. Are you in the secret councils of the executive committee or the finance committee?

A. No.

Q. Do you attend meetings of the executive committee and finance committee of the United States Steel Corporation?

A. I do not. But the Steel Corporation publishes a report every year giving a sworn statement as to the mines they control.

Q. And you are only speaking, now, of your knowledge of the mines they control?

A. Yes; that they control alone.

Q. And that is the extent to which you gave your opinion as to whether or not owners of other properties are absolutely independent?

A. Yes, sir.

MR. REED: Judge Dickinson, you have cross-examined several of our witnesses in that way, as to secret ownerships of land up there. Do you propose to follow this up by proof that there are any?

MR. DICKINSON: I do not think I am called upon to answer that question. You proved by this witness that these people were absolutely independent. It is proper that I should show the basis upon which he makes that statement. That is perfectly proper cross-examination, I think.

MR. REED: It seems to me there should be some basis,—and I have no doubt there is a basis,—for such a cross-examination.

MR. DICKINSON: The cross-examination is, of course, based on the direct examination. There is no doubt about the propriety of that.

MR. REED: But I have no doubt you would not ask such questions unless you thought there was basis for them. I wondered if you cared now to make any statement as to what you expect to prove about them, if anything?

MR. DICKINSON: I do not think I am called upon to make any statement at all. In the cross-examination of this witness I am confining myself to proper cross-examination. I do not think any declaration beyond that is necessary or proper.

Mr. Reed: Of course you remember there is nothing in the record at all to show that there is or has been any such secret ownership.

Mr. Colton: Secret negotiations.

Mr. Reed: I do not know what you mean, Mr. Colton.

Mr. Dickinson: Mr. Reed, you certainly have not forgotten that we brought out in the examination the ownership and control by the Tennessee company of the Seminole Land Company, another corporation down in Alabama, that has been acquiring ore lands?

Mr. Reed: Quite true, but I am not aware that it was ever concealed or denied.

Mr. Dickinson: I did not say anything about its being actually concealed, but it was in another name.

Mr. Reed: We have a great many subsidiaries.

Mr. Bolling: Something like several hundreds of them.

By Mr. Dickinson:

Q. What kind of mine is the Sauntry mine, as to quality of ore; I mean iron content and phosphorus content?

A. You mean the average analysis?

Q. Is some of it Bessemer ore?

A. The majority of it is non-Bessemer.

Q. Some of it is Bessemer ore?

A. A small amount of it, I do not remember how much, but it is mostly non-Bessemer.

Q. What is the quality of ore in the Sauntry mine both Bessemer and non-Bessemer, as compared with others, both as to iron content and phosphorus?

A. It is all right.

Q. Name the capacity of that mine.

A. Something over a million tons a year, if it was operated.

Q. Is that mine being operated now?

A. It is not.

Q. When was it last operated?

A. Somewhere along, I think, 1903, I am not quite sure.

Q. What is the extent of that property, the extent of the ores in it?

A. I do not recall exactly. Something over 25,000,000 tons.

Q. Where is the Penobscot mine situated?

A. The Penobscot is a short distance west of Hibbing.

Q. That is in Michigan, is it?

A. No, that is on the Mesabi.

Q. What are the reserves in the Penobscot mine, approximately?

A. I could not say off-hand.

Q. What is the quality of ore, Bessemer or non-Bessemer, or both?

A. Part Bessemer and part non-Bessemer.

Q. What is the quality of the ore as to iron content and phosphorus?

A. Standard grade, good grade of Mesabi ore.

Q. You say the larger portion of the Sauntry is non-Bessemer. How about the Penobscot?

A. I could not say. I do not remember; the records will show the percentage.

Q. Is that mine being operated?

A. No.

Q. When was that mine last operated?

A. I do not think it has been operated for eight or ten years.

Q. How about the Stevens mine? Where is that?

A. That is on the east end of the Mesabi.

Q. What is the reserve there?

A. Something over thirty million tons, I believe.

Q. Is that mine being operated?

A. It is not.

Q. When was it last operated?

A. I cannot remember exactly, but not in eight or ten years.

Q. Is it Bessemer or non-Bessemer or both?

A. It has got some of each, but mostly non-Bessemer.

Q. What is the quality of that ore as to iron content and as compared with other ores on that range?

A. Good merchantable ore.

Q. The St. Clair mine, where is that situated?

A. That is situated near Chisholm.

Q. Is that on the Mesabi?

A. That is on the Mesabi, yes.

Q. What is the reserve of that mine?

A. I do not recall.

Q. Is that mine being operated?

A. It is not.

Q. How long since that was operated?

A. Eight or ten years.

Q. Is that Bessemer or non-Bessemer or both?

A. Both.

Q. How is that in iron content?

A. Good merchantable ore.

Q. Good merchantable ore?

A. Yes.

Q. What other mines has the Steel Corporation or its subsidiaries, of good merchantable ore, in the Lake Superior region that have not been operated within the last six years?

A. They have a number of them; I cannot recall them right now so that I could make a statement, but I could prepare a statement if you wish it.

Q. There are a number of them, are there?

A. There are a number of them.

Q. Amounting in all to a large reserve of ore?

A. Fairly large, yes. The reason why most of those mines are not operating is because they are fee mines.

Mr. Dickinson: I offer for identification a paper entitled "Iron Trade Review, Lake Superior Iron Ore shipments, Gross tons for 1909 and previous years," and I will ask the witness to begin and take that list and name each of those mines appearing on that list belonging to the Steel Corporation.

Mr. Reed: Is that in evidence?

Mr. Dickinson: I am going to offer it in evidence, but it is within two or three minutes of adjournment time and I thought he might look that over during the recess.

(The paper was marked for identification "Government Exhibit No. 437.)

(Whereupon a recess was taken until 2 o'clock p. m.)

AFTER RECESS.

HELGE BACKSTROM

was called as a witness on behalf of the Defendants, and being first duly sworn, testified as follows:

DIRECT EXAMINATION

By Mr. Reed:

Q. Where do you live, Professor?

A. I live just outside of Stockholm, in one of the suburbs.

Q. What is your occupation?

A. I am professor at the University in mineralogy and petrology.

Q. In the University of Sweden?

A. In the University of Stockholm.

Q. Have you any position in the Swedish government?

A. I am a member of the Senate.

Q. A member of the Swedish Senate?

A. Yes.

Q. Have you at any time held any official position in any of the larger mining companies of Sweden?

A. Yes, sir; I have been on the board of the Grangesberg Company from the spring of 1902 to the spring of 1906. From 1904 to 1906 I was also on the board of the Luossavarra and Kiirunavarra Companies, and from 1906 to 1910 I have been consulting geologist for these companies.

Q. When you speak of being on the boards, you mean on the boards of direction of those companies?

A. Yes.

Q. Have you written any text books or treatises on geology?

A. I have written a large number of papers, I would rather say, than text books, on my special subjects, including two on the subject of the Kiiruna ores.

Q. Have you made any special study of the iron ore deposits of northern Sweden?

A. Yes. In 1896 I spent about six weeks in the Kiiruna with Dr. Lundbohm, who was then State Geologist, and is now general manager of the mines up there.

Q. What was the purpose of the study which you and

Professor Lundbohm made of the north Swedish deposits at that time?

A. It was to find out the geology and the greatness of these deposits, to form a basis for a discussion of the railroad that was decided upon a few years afterwards, I think in 1898.

Q. Where was this railroad to be built to?

A. The railroad from the Baltic to Gellivare was constructed before; but the question then was to continue the railroad from Gellivare to Kiiruna, and from there to the Norwegian Coast, Norvik.

Q. Were those railroads actually built to those places?

A. Yes.

Q. And are those mining districts now connected by railroad with the ocean?

A. Yes; the Kiiruna since December 19, 1902.

Q. Have you made studies of the different iron ore deposits since that time when you went with the government party?

A. Yes; not for so long a time, but I have been there several times.

Q. Are you familiar with the development work that has been done and with the mining operations that have been put in?

A. In a general way I believe that I can say that I am.

Q. Are you familiar with the diamond drilling that has been done in the ore deposits?

A. In so far as it has been published; and I believe the most interesting things have been published.

Q. Have you made estimates of the quantities of ores in these districts?

A. Yes, as regards the great iron mountain of Kiirunavarra and another called Ekstromberg.

Q. Have you also made personal investigations of the Gellivare deposits?

A. Not so detailed. I have been there several times.

Q. And have you made personal investigations and calculations of the iron ores at Ekstromberg?

A. Yes.

Q. What is the nature of the deposit at Kiirunavarra?

A. It is a big lump of ore, or lens, if you like, of ore, continuous, with perhaps a couple of smaller lenses next to it.

Q. How does it appear upon the surface, Professor Bäckström?

A. It forms the ridge of the mountain.

Q. How long is that mountain?

A. The ridge is about two English miles.

Q. How wide is the deposit?

A. The deposit varies, up to 110 meters. It has slight variations, but the greatest width is about 110 meters.

MR. SEVERANCE: About 400 feet, that would be?

THE WITNESS: About 330 feet.

By MR. REED:

Q. Has the depth of that deposit been tested by diamond drillings?

A. Yes; on a very large scale.

Q. Has that been done under the auspices of the company or of the government?

A. Both. The first drillings were made by the State, but the most extensive drilling has been done by the company.

Q. Are you familiar with the drillings that have been done by both the State and the company?

A. Yes, sir.

Q. What is the average iron content of that ore in the Kiirunavarra deposit?

A. It is almost a pure mixture of iron ore and the phosphoric mineral apatite, with only one per cent., or say, two per cent. of different things; and the relation between the pure iron ore, or magnetite or hematite, and in rare cases apatite, is very much varying. So that when the ore is low in phosphorus and high in iron, they are the Bessemer ores, and from Kiiruna they run up to 69.4. I can give you an average.

MR. DICKINSON: You are speaking of dry?

By MR. REED:

Q. Are these analyses dry or natural, as we call them in this country? Does the ore carry any moisture?

A. No. I think they are dry—100 degrees.

MR. COLTON: That would be centigrade?

By MR. REED:

Q. When you say dried at 100 degrees, you mean dried at the boiling point of 100 degrees centigrade?

A. I mean the boiling point of water, yes.

Q. That is 212 degrees Fahrenheit?

A. Yes.

Q. Now you have given us the iron content of some of the Bessemer ores as 69.4.

A. 69.63 is the average of five years' shipments, from 1903 to 1909.

Q. 69.63?

A. Yes.

Q. That is the average for all the shipments for five years, is it?

A. Yes.

Q. How about the non-Bessemer ores? How high do they run in iron?

A. The principal shipment contains about one and a half to two per cent. phosphorus, containing 62½ iron.

Q. That is low grade ore, is it, by comparison?

A. There is phosphorus and iron ore, so that you cannot call them low grade.

Q. Have you recently made an estimate of the tonnage of iron ore in Kiirunavarra alone?

A. Well, there are official estimates made; there is one given in that book you have there of iron ore.

Q. Published in Stockholm in 1910?

A. Yes.

Q. What is that estimate?

A. That is above the lake. The mountain rises over a lake, and above the lake it is above also approximately the railroad tracks. It is estimated at 240,000,000 tons, and then they estimated in 1910 that 300 meters below the level of the lake they had 500,000,000 tons.

MR. DICKINSON: In addition to that?

THE WITNESS: In addition to that.

By Mr. Reed:

Q. Had the diamond drillings gone to the depth of 300 meters?

A. Yes, they had, but only in one instance, and the drilling has been continued so that they have struck the ore and gone through the ore 300 meters below the level of the lake and found in that special case the ore was thicker down there than it was on the surface. This gave to the previous estimates a much higher degree of security, this recent boring. That is not published there; it is very recent. It was published in a document given to the Swedish Parliament this year.

Q. That is a governmental document?

A. Yes; I have not been able to find it on this side. I tried in Washington.

Q. You have tried to get a copy of it in this country?

A. They had not received the 1913 parliamentary papers in Washington yet in the Library, but I am familiar with it as I was myself in the Senate.

Q. What is the latest estimate of the total tonnage of iron ore in the Kiiruna Mountain alone, down to the bottom of the present drill records?

A. I think we could take what is given then as 240 million tons above this level, but this 300 meters level has no scientific interest. It may have a practical interest, so as to feel sure of what you have got above that, but from a purely scientific point of view it is my personal conviction that you may reckon on double that quantity. That is a very firm conviction of mine, that you may reckon on 1,500,000,000 tons.

Q. And all that in a mountain two miles long and in a single ore body?

A. Yes. Well, I think more lands will be included in there, but it is principally in one body.

Q. Outside of this wonderful Kiiruna deposit are there other deposits of iron ore in Sweden?

A. Yes, there is Luosavarra on the other side of the lake. It is not so important. It is estimated that eighteen million tons are above the lake, and we do not know sufficiently to speak of the continuation and the depth.

Q. There are large deposits at Gellivare?

A. Yes. They are different in kind. They are more or less larger or smaller lenses. The total is given in the best estimates at 230,000,000 tons. That is about 382 meters below the present bottom of the mines.

Q. Have the diamond drillings gone that far below?

A. Yes. There are also recent drillings cited in that report to the government this year showing that the estimate of the Gellivare was not less than that for 1910.

Q. Now, the Gellivare deposits are also connected by railroads, are they not?

A. Yes, since 1892.

Q. 1892 or 1902?

A. No, since 1892.

Q. Professor Bäckström, from which of these deposits, if either, did the ores that were exported from Sweden for the Bethlehem Steel Company come?

A. I have not heard, but it is supposed that they came from Kiirunavarra. They were Bessemer ores, I believe.

Mr. Dickinson: I object to his stating anything on hearsay.

By Mr. Reed:

Q. Which of these deposits is now being worked for export?

A. Both; the ore is very similar, so that it does not matter very much from which part it comes.

Q. The ores of the two deposits are much alike?

A. Yes; Kiirunavarra is not quite so high, but still quite comparable.

Q. Are there other ores in Sweden besides these great deposits in northern Sweden?

A. We have in northern Sweden still some deposits lying as a reserve for the future. They belong to the state. I mentioned one before I had investigated, that is Ekstromberg, which probably contains about 100,000,000 tons also, and running from 61 to 64, also a rich ore.

Q. But these other deposits that you spoke of as reserves are owned by the Government of Sweden?

A. Yes; they are.

Q. The large deposits at Kiirunavarra are owned by a private company, are they not?

A. They are owned by a private company, in which the Government has half of the shares.

Q. The government is a half stock holder?

A. Yes.

Q. How about the Gellivare deposits, how are they owned?

A. In the same way, by the same company.

Q. Are there deposits in southern Sweden, too?

A. Yes, we have the earlier known and first used for export, the ore of Gellivare in middle Sweden. There the estimate runs to 145,000,000 tons.

Q. Is it from that district that the ores come for the old Swedish irons?

A. No; all of those ores I have been speaking of are in the main high in phosphorus, and consequently they could not be used before. The well-known Swedish ores are Bessemer ores, and they are not spoken of in this connection.

Q. You are not including any of these old mines?

A. No, I am not. I am speaking only of the ores that are exported.

Q. Most of the ore from these old mines is used in Sweden, is it?

A. Yes, to a certain extent it is now concentrated and exported in the form of briquettes.

Q. Are the reserves of that old ore very large as compared with the north Sweden reserves?

A. I am sorry to say not.

Q. They are not large enough to add materially to these great tonnages in the north?

A. No, they are not.

Mr. Reed: You may cross examine.

CROSS EXAMINATION

By Mr. Dickinson:

Q. From how many mines, Professor Bäckström, were ores exported from Sweden to the United States in the year 1911?

A. I cannot answer that. I do not know, but I know there were exported from the mines in Gellivare and Kiirunavarra in 1910 about 400 tons. I do not know how much in 1911.

MR. REED: 400 tons?

THE WITNESS: 400,000 tons.

By MR. DICKINSON:

Q. Do you know how much went to the United States and how much went to Germany?

A. No. In 1910 about 400,000 tons were exported to the United States. I have not heard or seen the numbers for 1911 and 1912.

Q. Was any of that ore in Sweden exported to Germany?

A. Oh, much more.

Q. How is that?

A. Much more.

Q. Much more?

A. Yes.

Q. Are there any steel manufactories in Germany?

A. Certainly.

Q. How?

A. Certainly; very great.

Q. Very great?

A. Yes.

Q. Have they been increasing in late years in size?

A. Yes, they have.

Q. They have been increasing?

A. Yes.

Q. To what other European countries do the Swedish ores go?

A. To England.

Q. To England?

A. Yes, and, to a small extent, also to Belgium and France, but the chief European customers are Germany and England.

Q. From how many of these drill holes, Professor, did you yourself personally examine the cores?

A. I would say I have not examined any of these drill holes so in detail that I could tell—you know, that is a rather difficult thing, to reconstruct a drill hole. Some small pieces

may fall away, and I have not had anything to do with the drilling, but I am citing from the best sources I have got.

Q. Now, the sources of your information upon which you have made your estimates are mainly from reports made by mine operators to the government?

A. Yes, that is true; but I must say that they have been taken for good by the Swedish government and parliament.

Q. You have not examined the original data on which these reports were based?

A. No, I have not. I have seen the sections, but I have no reason to think that these officials or the company had any reason to make it more than—to make more of it than there really was.

Q. You accept it in good faith?

A. Yes.

Q. But it is all derived from others, and not based upon your personal investigation of the property itself and your personal exploration?

A. I know the geology of the property, and I have seen and studied that, but the special thing of making the drillings I have never had anything to do with.

Q. And these estimates are based largely on the drillings, are they not?

A. Well, not so much—not so much to me, because I think that you might make an estimate even without those drillings, but they are made—these drillings have been made to convince the Swedish authorities—I would like to change that and say that they have been made to make a better foundation for the estimates of the shape of this big iron ore lump or lens.

Q. While you could have made some estimate from the outward geological appearance and the contours, as a matter of fact these figures that you give of estimates are made in connection with the developments shown by these drill reports?

A. Yes.

Q. And it is upon those that your conclusions are based?

A. Yes.

MR. DICKINSON: We except to the estimates made upon data which is shown to be hearsay and secondary, as incompetent.

By Mr. Dickinson:

Q. How far from the seashore are these mines situated from which ore is being carried to the seashore?

A. Kiirunavarra is situated 170 kilometers from the sea, and Gellivare ships over the Lulea—over the Baltic—210 kilometers.

Q. How long have those roads respectively been in operation?

A. The Gellivare ore began to be exported in 1892, and the first shipment of Kiirunavarra ore began in January, 1903.

Q. 1903?

A. Yes.

Q. Now, do you know the amount of ore that was carried from the Swedish mines to the United States in 1909?

A. Yes, I know that. In 1909 it was 127,000 tons.

Q. Can you give it to us for 1908?

A. No; only small quantities.

Q. Is that as far back as you can go?

A. Well, the first shipment of any importance to the State was made in 1909, and that was 127,000 tons.

Q. I believe you stated that half of the interest in these mines that you have spoken of as being operated, is owned by the State.

A. Yes.

Q. A half interest, I mean?

A. Yes, of the shares.

Q. Half of the shares?

A. Yes, but the shares are not equal.

Q. They are not equal?

A. No.

Q. Now, so far as interest is concerned, how would the holdings of the State compare with the other holdings?

A. The ordinary shares kept by the State receive only a royalty. The rest of the income goes to the preference shares. The ordinary shares get only a royalty. This will last until 1937. Then all shares will have the same value.

Q. Now, has the State a right to vote on those shares at stockholders' meetings?

A. No, they do not vote, but they have a right to put in one director, and I do not know what you call it—one accountant, comptroller.

Q. What control does the State retain, if any, over these mines and their operation?

A. They have this director on the board, and this comptroller, who has access to all the books of the company, and then the government owns the railroads, and consequently, it can control everything that crosses those railroads.

Q. The government controls the rates on the railroads?

A. Yes, the government owns the railroads.

Q. The government owns the railroads?

A. Yes.

Q. And consequently, it can fix the rates?

A. Yes, but the rates are fixed.

Q. The rates are fixed?

A. By a contract.

Q. How long does that contract run?

A. 1932.

Q. 1932?

A. Yes.

Q. And after that, why——

A. (Interposing) Well, it lasts practically— It may be prolonged.

Q. If the government consents?

A. Yes.

Q. But that lies with the government?

A. Yes.

Q. Now, there is a certain portion of these lands to which you have referred, that the government owns outright, I understand?

A. Not of these lands.

Q. No, not of those lands that belong to those companies, but other ore lands of which you have spoken?

A. Yes, but these are not worked.

Q. Those contain, I think you said, about 100,000,000 tons reserve?

A. In one of them I think the State has about 160,000,000 tons.

Q. One, I understood you to say, was 100,000,000 tons and the other about 145,000,000 tons?

A. 145,000,000 tons is the Grangesberg, in middle Sweden.

Q. In middle Sweden?

A. Yes, but the reserves of iron ore owned by the State in northern Sweden may be estimated at something like 150,000,000 tons.

Q. 150,000,000 tons?

A. Yes.

MR. DICKINSON: That is all.

REDIRECT EXAMINATION

By MR. REED:

Q. Professor Bäckström, Sweden is not the only source of supply for the German furnaces, is it?

A. No.

Q. They have ores in Germany also?

A. Oh, yes; the bulk of the ores used in Germany comes from German mines.

Q. From German mines?

A. Yes.

Q. And in England the bulk of the ore used in the English furnaces comes from the English mines, does it not?

A. Well, I am not quite sure. I cannot say the bulk, but England has very great resources of ore.

MR. REED: That is all. Thank you.

WILLIAM JAMES OLCOTT,

a witness previously sworn on behalf of the defendants, was recalled and testified further as follows:

CROSS EXAMINATION—(Continued)

By MR. DICKINSON:

Q. Please look at Government Exhibit No. 437 here shown you and state which of the mines appearing there belong to the United States Steel Corporation.

A. Taking the Mesabi range first, in alphabetical order, we own at the present time the following list of mines: Adams, Auburn, Burt, Canisteo, Canton, Chisholm, Clark, Day, Diamond, Duluth, Fayal, Genoa, Gilbert, Glen, Hartley, Higgins No. 2, Holman, Hull, Hull-Rust, Lake Superior Group, Leonard, McKinley, Minnewas, Monroe, Morris, Mountain Iron, Myers, Penobscot, Pillsbury, Rust, Sauntry-Alpena, Sellers, Sharon, Spruce, St. Clair, Stephens, Sweeney, Tener and Virginia Group.

On the Mesabi range we also own a quarter interest in the Biwabik and one-fifth interest in the Mahoning, and a half interest in the Union.

Next taking the Gogebic range, in the same alphabetical order, we own the following:

The Atlantic, Chicago, Geneva, Norrie Group, and Tilden mines.

On the Menominee range we own the following:

Aragon, Chapin, Cuff, Cundy, Mansfield and Michigan mines.

We own a half interest in the Pewabic.

On the Marquette range we own the following:

Champion, Lake Superior, Moore, Queen and Stegmiller.

On the Vermillion range we own the following:

Pioneer, Savoy, Sibley, Soudan and Zenith mines.

We did control the Chandler up to the end of 1907. That is when we made our last shipment. We owned in Wisconsin the Iron Ridge Mine.

Q. Please state whether or not between 1901 and 1911 there were any mines there that were operated by the corporation, or in which it had any interest in the operation of, outside of those that you have mentioned? You have mentioned the Chandler as having been given up. Are there any others in which it was interested at any time that have been given up?

A. I do not quite catch your question. In which they own an interest with somebody else?

Q. You have mentioned all those that it owned?

A. Yes, sir.

Q. And all in which it had a part interest?

A. Yes.

Q. And also the Chandler, which it had owned and has given up?

A. Yes.

Q. Now, are there any which from 1901 down to 1911 it owned and which have been given up?

A. Yes, we were operating at one time the Negaunee mine, on the Marquette range.

Q. When did you quit that?

A. I cannot recall. The record will show that.

Q. Are there any others there besides the Nagaunee?

A. Those were little bits of things that did not amount to anything. We owned them and gave them up.

Q. Mention the names, will you?

A. We were operating at one time the Forest mine and the Hill Top mine. They were practically nothing but explorations; they were not really operating mines, and shipped but a very few thousand tons of ore.

Q. This paper which is entitled "The Iron Trade Review Lake Superior iron ore shipments (gross tons) for 1909 and previous years," please state whether or not that is regarded and accepted as an authority in the iron trade?

A. I think it is, yes.

MR. DICKINSON: We offer this in evidence, Mr. Reed.

MR. REED: That is objected to for the reason that it is not sufficiently proven, and for the further reason that the Government has closed its proofs in this case.

(The paper referred to was thereupon marked "Government Exhibit (Olcott) No. 437, October 6, 1913," and will be found in the volume of exhibits.)

By MR. DICKINSON:

Q. Mr. Olcott, state whether or not the United States Steel Corporation at any time between its formation and the first of January, 1905, had any mine on the Mesabi range upon which it was paying a royalty in excess of fifty cents, and if so, what mine or mines?

A. I do not think it had any mine on which it was paying in excess of fifty cents a ton. I do not recall it.

Q. Please state whether there were any mines on the Mesabi range upon which the United States Steel Corporation at any time between its formation and January 1, 1905, was paying a royalty as high as fifty cents, and the date of the acquisition of said mine or mines.

A. 1905?

Q. From 1901 to 1905, yes.

A. Yes, they were paying fifty cents a ton on some ores.

Q. Which mines?

A. The Chemung lease called for fifty cents a ton.

Q. Is that the name of the mine?

A. That is the name of the lease. It covered a number of properties; covered ten or twelve different properties.

Q. When was that lease taken?

A. January 1, 1903.

Q. After the formation of the corporation?

A. Yes, sir.

Q. I have spoken now of royalties paid prior to January 1, 1905. Were there any mines upon which the United States Steel Corporation paid in excess of 50 cents before January 1, 1906?

A. I cannot give you these royalties at particular dates. I can say that after 1903 we had properties on which we paid higher than 50 cents outside of the Hill lease—50 cents per ton outside of the Hill lease.

Q. Higher than 50 cents?

A. Yes, sir.

Q. That is to say——

A. (Interposing) As high as 75 cents.

Q. You mean at some period between 1901 and the Hill lease?

A. And at the present time.

Q. And at the present time?

A. Yes.

Q. Now, what were those mines? You have already stated that up to January 1, 1905, you were not paying in excess of fifty cents. Now, what mine or mines——

A. (Interposing) I am not quite clear now but what we paid 75 cents a little before the Hill lease; I am not sure.

That is a matter of record which I could find out, if it is important.

Q. Well, I would like to know.

A. I can let you know by referring to the record, but I cannot be expected to remember every lease we have taken, and the rate of royalty on them at each particular year. I can get that information for you.

Q. I will be very glad if you will. When were the negotiations for the Hill lease begun?

A. Some time previous, or several years previous to 1907.

Q. Did they not begin along in 1903 or 1904?

A. Several years, I said, previous to 1907.

Q. And they eventuated in a lease in 1907?

A. Yes the lease was taken dated in January, 1907.

Q. Now was there not an agreement in which all the terms were settled, reached some time prior to the actual execution of the lease?

A. I do not know anything about that.

Q. You stated in regard to the Baraboo explorations, on page 12115, as follows:

"We have been much disappointed, and we have come to the conclusion that it is not much of a mining proposition; more of a pumping proposition than it is mining."

Did you not make your explorations and the investments in the large sums that were made there with the expectation of developing iron ore? I mean, your company?

A. I do not quite catch your point.

MR. DICKINSON: Read the question, will you not?

(The question was read by the stenographer.)

THE WITNESS: They certainly did. Mr. Cole was the president at that time, and he was very anxious to increase the ore reserves, and the people who had this property represented that they had large tonnages of ore. There was some ore down there that showed very good merchantable ore, and the International Harvester Company had opened up a mine and made some shipments, but it remained to be determined whether upon opening up this property we had under option, we would find much ore or not.

By Mr. Dickinson:

Q. When was that work of opening up begun there?

A. In our mine?

Q. Yes.

A. Oh, we have been working there for three or four years and are now.

Q. You say Mr. Cole was president at that time?

A. Yes.

Q. President of the Oliver Mining Company?

A. Yes.

Q. How long has he been president of the Oliver Mining Company?

A. How long has he been president?

Q. Yes.

A. Well, he was president from 1901 to 1909.

Q. Then he was the person who had been mainly in charge up to that time—1909—and he was in charge of the investment in these properties?

A. Yes, he was the executive officer of the Oliver Company.

Q. And it was on his judgment that that investment was made?

A. Yes, sir.

Q. Based on expert opinions that he had, was it not?

A. Well, it was based on his optimistic view, in great measure.

Q. He had some supposed data, did he not, or something to go on?

A. They had the data there—the drill holes—yes.

Q. It was not merely a wild shoot in the air?

A. I thought at the time it was pretty wild; yes, sir.

Q. And your anticipations were verified, but his were not?

A. That is the way it turned out.

Q. He was honestly mistaken, do you not think?

A. Yes, I think so. I do not think Mr. Cole would do a thing if he did not think it was honest.

Q. He really thought he was justified in making these investments?

Mr. Reed: Mr. Olcott cannot know what Mr. Cole thought.

Mr. Dickinson: Well, I think you will admit that.

MR. REED: Then that will save asking anybody about it.

MR. DICKINSON: You spoke of steel companies getting a large tonnage in the open market, and you said that a good many steel companies have been doing that; that that has been the practice for years. Do you know any steel company that has been relying entirely upon the open market for its ore? I mean, any steel company of any magnitude?

A. I know that the Inland Steel Company built a plant and started to operate, without any ore.

Q. When was that?

A. I think that steel plant was operating in 1905. The first mine they acquired was the Laura Mine on the Mesabi Range. They acquired it after their plant was built.

Q. When did the Inland Steel Company organize?

A. I don't know.

Q. Wasn't it in existence in 1901?

A. I do not know, but I know they were operating in 1905.

Q. But you do not know how much earlier?

A. No, I do not know just the date of the organization.

Q. Do you know whether they had any ore reserves prior to 1905?

A. I don't think they had any.

Q. You are speaking of knowledge?

A. General knowledge.

Q. Not from accurate, positive knowledge?

A. Not from their books, but I think it is so accurate that I can rely upon it.

Q. Is there any other company that you can think of of any magnitude?

A. I do not know the particular companies, but I know this year that about 15,000,000 tons out of about 48,000,000 to 50,000,000 tons were sold in the open market.

Q. The question is whether or not you know of any company that at this time, or any time within the last few years, has depended for its operation entirely upon the open market.

A. I think within the last few years furnace people have acquired reserves so as not to rely entirely upon the open market.

Q. Your answer, then, would be in the negative, would it not?

A. Yes, it would be, that they did not rely entirely.

Q. You were asked about the purpose of securing the Chemung Mine. When was that secured?

A. The Chemung lease, you are referring to?

Q. Yes, the lease.

A. That was secured in January, 1903.

Q. What position did you hold then with the company?

A. I think I was either general superintendent or assistant general manager of the Oliver Company.

Q. You did not attend the meetings of the finance committee or the executive committee?

A. Of the Steel Corporation?

Q. Yes.

A. No, sir.

Q. Were you taken into their councils as to their purposes and plans? Did they consult you confidentially as to that?

A. No, sir.

Q. Did you know anything about the negotiation with the owners of that property, to engage in the purchase of ore properties thereafter? Did you have anything to do with that?

A. No, sir.

Q. Did they confer with you about that?

A. No, sir.

Q. Now, about the purpose of acquiring the Canisteo, were you in council with the directors as to what their purpose was in doing that?

A. I was not.

Q. At the time you took the Hill lease, what did you estimate then to be the Bessemer tonnage?

A. About 30,000,000 tons.

Q. And did that turn out to be about the amount, on further investigation?

A. I think there was more than that.

Q. Then you were not disappointed in the amount of Bessemer you got under that?

A. We certainly were.

Q. You estimated it was 30,000,000 and it turned out there was more?

A. More.

Q. So that it turned out more than you estimated there would be?

A. Not in proportion to the total tonnage displayed.

Q. I mean the actual amount was more than you estimated it to be?

A. No, I did not say there was; I say it was more than there was estimated, based on the explorations made at that time. I did not say there was 30,000,000 tons they ultimately found in the property. I say our engineer's estimate showed there was 175,000,000 tons of ore, of which 30,000,000 was determined to be Bessemer.

Q. That was the ultimate determination?

A. That was 30,000,000 out of 175,000,000 that was supposed to be disclosed by explorations at the time we took the Hill lease.

Q. And as a matter of fact you did get 30,000,000 or more, or there was 30,000,000 or more of Bessemer?

A. Yes.

Q. How many drill holes were there at that time on the Hill property; do you know?

A. I could not say.

Q. Did you make the estimates then?

A. I did not.

Q. How did you get your information, then?

A. People that we hire for that business.

Q. Was Mr. Sebenius one that made the estimates?

A. Mr. Sebenius was in charge of the engineering department.

Q. Is there not a much greater demand now for open hearth steel than there was in 1901?

A. I think there is.

Q. Has not that been a constant increase, and consequently has there not been a constant increase in the utilization of non-Bessemer ores?

A. Yes.

Q. How many of the plants of the United States Steel Corporation use exclusively Bessemer ore, if any?

A. I do not know whether any of them do exclusively.

Q. Is not the larger part of their capacity adapted for open hearth?

A. The largest part, you mean?

Q. The larger part.

A. I don't think so.

Q. You mean to say that their capacity for making Bessemer steel is equal to their capacity for making open hearth steel?

A. That is what my understanding is, and more so. Some of their Bessemer plant is idle.

Q. How is that?

A. My understanding is that they have a greater capacity for Bessemer than non-Bessemer or open hearth, and some of their Bessemer plants are not operating.

Q. I mean those that are operated.

A. It is evident from the fact that we are using 50 per cent. Bessemer and 50 per cent. non-Bessemer that their capacity is about equal.

MR. REED: Are you taking scrap into account?

THE WITNESS: No, I am not.

By MR. DICKINSON:

Q. Is Bessemer ore relatively as much in demand now as it was in 1901? Does it have the same relative importance in the steel industry that it had then?

A. I do not think it has.

Q. From 1901 and for some time after that was not the steel industry based mainly on Bessemer ore?

A. I think about 70 per cent. of it was in 1901, close to that.

Q. Do you know in 1901 what percentage of the capacity of the independents was in Bessemer?

A. No, I do not.

Q. And how much open hearth?

A. No, I do not.

Q. How about 1906?

A. I do not know anything about the capacity.

Q. Would it be the same for 1907, that you do not know?

A. I do not know it.

Q. Take this Exhibit 101 that was introduced in connection with your testimony and was put in evidence, entitled "List of Mesabi Range Properties Containing Ores Submitted to Various Companies Subsidiary to the United States Steel Corporation But Not Acquired by Said Corporation or Any of Its Subsidiaries."

How far did you participate in making up this exhibit?

A. I participated in so far that I gave instructions to our different departments to get all the information on file in the offices in the various departments so as to compile that information.

Q. And in compliance with those instructions, this was presented to you as a compilation?

A. Yes.

Q. And that is all you had to do with it?

A. I know that in checking the thing over, I am quite familiar with practically all of those properties——

Q. What do you mean by checking this thing over? Looking it over?

A. Looking it over; reading it over.

Q. Reading it over?

A. Yes.

Q. So, then, you gave instructions to have it compiled?

A. Yes.

Q. And it was compiled?

A. Yes.

Q. And you read it over, and that is all you had to do with the preparation of it?

A. Yes.

Q. Did you read it all over before you gave your testimony in this case?

A. I looked it over.

Q. There is a difference between looking it over and reading it over. Did you go over all the figures here?

A. I looked over all those properties that are itemized there.

Q. Did you examine all the figures here?

A. Practically; yes, sir.

Q. "Practically"? What do you mean by "practically"?

A. Well, I read it over; I read everything I thought important.

Q. Am I to understand that you took this paper and from beginning to end, read everything that is in it?

A. Yes, sir.

Q. You did not actually compare it, as I understand, as to any data?

A. No, I did not.

Q. Did you carry in your mind all of those figures?

A. No, sir.

Q. Have you any of them in your mind now?

A. I have some of them.

Q. Well, now, let us see. What facts can you give as to lot No. 6, and the northeast quarter of the southwest quarter and west half of the southeast quarter, June 9, 1903, by W. D. Washburn and others, Minneapolis, Minnesota?

A. I would say that is a small property, located in the Colerain district, right north of Trout Lake.

Q. What bonus was demanded for that particular——

A. I do not remember the bonus now.

Q. What royalty was demanded for it?

A. I don't remember the royalty. I presume it was about 25 cents a ton.

Q. What was the minimum number of tons that were to be taken out?

A. I do not recall.

Q. You do not know anything about the accuracy of those figures, except as they are set forth here?

A. I remember at the time negotiations were being carried on with Mr. Washburn, and I have no doubt those figures are correct. I do not remember back eight or ten years just exactly——

Q. Is it not a fact, Mr. Olcott, that you have no doubt about the accuracy of these figures simply from the fact that you rely upon the accuracy of those who prepared them from what you regard as reliable data?

A. Yes——

Q. But you do not remember these figures?

A. I do not pretend to, or to carry every one of those figures in my mind.

By Mr. Dickinson:

Q. And you do not pretend, in looking at these figures, that you can remember that these figures are correct?

A. Not exactly as to all of those figures, no.

Q. Let us see whether you can as to some of them. Take lots 3 and 4 and lots 1 and 2.

A. Those properties to which you are referring are a lot of little properties that do not mean much tonnage. I can give you a few instances where the tonnage did amount to something and where it was of some importance.

Q. What would you call amounting to something and of some importance?

A. I would say it was up to 20,000,000 tons of good merchantable ore; that would be of some importance.

Q. Can you name any particular one on this paper?

A. Yes.

Q. Can you name any particular one that ran as much as 20,000,000 tons?

A. I can; very close to 20,000,000.

Q. Which ones?

A. Look at the southwest quarter, section 27-58-20, and you will find the property there listed at something over 19,000,000 tons.

Q. Yes; that is "W. J. Olcott to Mr. Gayley." Is that it?

A. Yes.

Q. Who is W. J. Olcott?

A. I am the man.

Q. You mean that you owned the property?

A. I had a slight interest in it, and I had the placing of it at one time, before the formation of the United States Steel Corporation.

Q. What does this mean here: "W. J. Olcott to Mr. Gayley"?

A. I will give you a little bit of history as to that. When the Steel Corporation was formed, I did not know just exactly where I was going to land. I was with the Rockefeller people. So, before going to the Steel Corporation I became interested in two or three options, where some drilling was done, and where I paid for the drilling to secure an interest on the option. This was one of the properties. After I secured employment with the Steel Corporation through Mr. Gayley, I told him that I had an interest in and the handling of a property, and that I had the placing of the property when it was placed on the market. I kept him advised from time to time of the explorations of that property, and gave him a chance to buy it, and it was submitted to the Steel Corporation through Mr. Gayley, and declined.

Q. And you were then in the employ of one of the subsidiaries of the Corporation?

A. I was then in the employ of one of the subsidiaries of the Steel Corporation, the Oliver Iron Mining Company.

Q. And did you recommend this property to them?

A. I did.

Q. And they declined to act on your recommendation as to the sale of your own property?

A. It was not my property. I think I had a very contingent interest in it.

Q. The contingent interest, then, depended on the sale, did it not?

A. Surely.

Q. And you recommended the purchase of this property by the United States Steel Corporation?

A. I did.

Q. And they turned that down?

A. Yes, sir. The interest that I had—I would like to state right here—was a small interest in the royalty, the advance royalty.

Q. This offer was made in 1901, was it not?

A. About 1901.

Q. Shortly after the formation of the United States Steel Corporation?

A. Yes, sir.

Q. What became of that property afterwards?

A. It afterwards went into the Hill lease.

Q. And then went to the Corporation under the Hill lease?

A. Yes, sir.

Q. Name some other property where there was a large amount that was recommended and turned down?

A. The Morton mine.

MR. REED: That is the second one on page 2, Judge.

By MR. DICKINSON:

Q. The Morton mine. What was the tonnage of that mine?

A. I think there was eight or nine million tons there.

Q. It is set down here as 4,914,000——

A. About five million tons. I think about five million tons.

Q. You recollect it was 5,000,000 tons after I read it out to you that it was four million and some odd thousand?

A. I recollect it now.

Q. Since I made that suggestion to you, was it not?

A. No, sir.

MR. REED: You cannot blame him for following your suggestion, Judge.

MR. DICKINSON: But he followed it so quickly; that was the trouble.

THE WITNESS: I am trying to give the information here the best I can; I think you want to know the truth.

By MR. DICKINSON:

Q. I know, and I am simply trying to find out how much of this is hearsay.

A. Yes, and you are trying to find out if I slip up a little. I cannot remember all of these things. I am trying to give you the best I have got in me.

Q. Then we will get along all right.

A. That is the idea.

Q. What was the royalty to be on that?

A. I think it was twenty-five cents a ton.

Q. That is your recollection of it?

A. Twenty-five cents a ton to thirty cents a ton. I would not be sure.

Q. It says here seventy-five cents a ton. Which is correct, the seventy-five cents a ton or the twenty-five cents a ton?

A. I would not say. Does it not show that it was offered several times there?

Q. I have not got but one place yet. Yes, it does.

A. I think it was offered several times, first at twenty-five cents and later at seventy-five cents a ton.

MR. REED: It shows that it was offered three times.

By MR. DICKINSON:

Q. The first time it says here: "Not known." When you examined these figures and read that "Not known," did you know that it was twenty-five cents instead of not being known?

A. What do you mean? The royalty?

Q. The royalty.

A. As I recollect it, it was about twenty-five cents a ton.

Q. But when you read over this page and saw it put down "Not known," why did you say this paper was correct, if you did actually remember that it was twenty-five cents?

A. I did not say I actually remembered it. That is my impression.

Q. But, with that impression that it was twenty-five cents a ton, nevertheless you put your approval upon this document here, which states that it was not known. Is not that true?

A. They did not find the exact correspondence, probably, showing the royalty.

Q. On the second offer, May 2, 1907, what was the minimum to be per year?

A. I do not remember.

Q. What was the bonus to be?

A. I do not remember.

Q. You say there were three offers? One offer I find here, March 3, 1906, by D. C. Rood. Have you any recollection of that offer?

A. I remember Dr. Rood controlled that property at that time or about that time. At one time he had it.

Q. That was before Mr. Carlson got it?

A. I believe so, yes.

Q. Do you know the terms of that offer?

A. I do not.

Q. Can you give any data about that?

A. I do not remember them. I do not try to remember those things.

Q. Really you do not, independently, have any knowledge, have you, of these figures set out here?

MR. REED: He has not testified that he did.

THE WITNESS: Not as to those detailed figures; no, sir. They were taken from our records.

By MR. DICKINSON:

Q. You do not know whether they are right, except that you have confidence——

A. Except that I gave the orders, and they were undoubtedly taken from our records.

Q. They were so reported to you?

A. I know as to this particular property, because I knew about that.

MR. DICKINSON: We except to this exhibit as incompetent, and the testimony based upon it upon direct examination as incompetent and secondary, and as based upon data not given and not examined and verified by the witness.

By MR. DICKINSON:

Q. We come now to Defendants' Exhibit No. 102, entitled "Iron Ore Properties in the Lake Superior District held by United States Steel Corporation," containing section one, properties held at formation; section two, properties acquired since its formation.

MR. REED: I understand Mr. Olcott has not testified that this is made from his personal recollection.

MR. DICKINSON: Well, I am going to ask him a little about that.

By Mr. Dickinson:

Q. Mr. Olcott, tell us just how this was made and to what extent you personally had to do with it.

A. This was made— I gave instructions to our different departments to get this information together from our records and from the information that they had.

Q. In compliance with that instruction, was this presented to you?

A. That was presented to me, yes.

Q. You did not compare this with any records?

A. Not in detail. I have checked over some of these totals in here to see that they checked with the Iron Trade Review reports of shipments, and with the totals given by the Michigan and Minnesota Tax Commissions.

Q. You notice that this purports to be properties held at the formation of the Corporation?

A. Yes, sir.

Q. Now, do you mean to say that you checked over those properties by anything?

A. I have not, not individually.

Q. Not individually?

A. No.

Q. How about section two, properties acquired since its formation? Have you checked them over by anything?

A. No, sir.

Q. Then you have just accepted this——

A. I had it compiled.

Q. Relying upon the care of those who have compared it with the original data?

A. Yes, sir.

Mr. Dickinson: We except to this as incompetent and as secondary evidence, based upon data not presented to the Court and not verified by the witness.

Mr. Reed: Part of it was data that you have already proved in your case in chief.

Mr. Dickinson: How?

Mr. Reed: Part of the data from which that is made up has already been proved by you in your case in chief.

MR. DICKINSON: That part of it I have no doubt will be perfectly good, but I do not recall which part it is, Mr. Reed.

MR. REED: Well, you are going to except to everything to get it all?

MR. DICKINSON: Yes.

By MR. DICKINSON:

Q. Now, on this paper are given reserves, in the first section, as of April 1, 1901. Do you know what ore analyses were taken as the basis of estimating that tonnage of those various mines?

MR. REED: That all appears in your own evidence, in your Tax Commission reports.

MR. DICKINSON: I do not know that it does. At any rate I——

THE WITNESS: (Interposing) These figures are based upon the reserves and the estimates shown in the Tax Commission's reports for Minnesota and Michigan.

By MR. DICKINSON:

Q. Do you mean for the year 1901?

A. Yes.

MR. REED: 1901?

THE WITNESS: These figures—the estimates are based upon—the reserves as of January 1, 1912, are taken from the Tax Commissions' reports, and they have added the shipments to that.

MR. DICKINSON: I asked you not about 1912, but about 1901.

THE WITNESS: I just explained that in order to get 1901 we took the reserves of 1912 and added to them the shipments in order to get what it was in 1901.

By MR. DICKINSON:

Q. Do you know what character of ore was embraced? That is to say, what was the iron content?

A. It was merchantable ore. I do not know just exactly the figure.

Q. But you cannot give the analysis or the minimum?

A. I did not make the estimates.

Q. How?

A. I did not make the estimates.

Q. You do not know anything about it?

A. Not of my own knowledge.

Q. This ore that is given in 1912, do you know whether that was merchantable in 1901?

A. I think it was.

Q. Do you mean to say that the estimates for 1912 did not include a lower metallic content than was included in making the estimates for 1901?

A. It may have included some.

Q. As a matter of fact, Mr. Olcott, between that time had not the minimum of what was necessary to make merchantable ore been reduced very much and constantly reduced, from 1901 to 1912?

A. Oh, it had been reduced from two to three per cent.

Q. Well, three per cent. cuts quite a figure, does it not, in the volume of ore?

A. Sometimes.

MR. DICKINSON: This exhibit, Defendants' Exhibit No. 102, and the testimony based upon it is excepted to as secondary and hearsay, and as based upon data which is not produced, and as to the accuracy of which the witness has not shown himself competent to testify.

By MR. DICKINSON:

Q. Now, we will take up Defendants' Exhibit No. 103, entitled "Statement showing (a) Tonnage shipped from the Lake Superior district for the years 1907 to 1911," etc., and I will ask you how this was prepared; what part you had in preparing it.

A. I gave instructions to have it prepared.

Q. And it was prepared and delivered to you?

A. Yes, sir.

Q. And you made no comparison of data with the sources from which it was prepared?

A. I have. I have compared the total shipments with the totals given in the Iron Trade Review, and I have compared the total of ore reserves for Michigan and Minnesota with the reports of the Tax Commissions for those States.

MR. REED: And that is all there is in the statement?

THE WITNESS: That is all there is in the statement.

By MR. DICKINSON:

Q. Between 1907 and 1911 were any shipments of ore made by the Corporation, for the use of manufacturers other than its subsidiaries?

A. I do not think so; not to my knowledge.

Q. Do these shipments here indicate exclusively the ore shipped by the Corporation, or does it include ore shipped for others? I do not mean ore belonging to the Corporation shipped for others, but does it include any tonnage that was shipped by others?

A. I think it includes the tonnage representing our interest in the Mahoning, Biwabik, Union and Pewabic mines.

Q. And not the interest of others in those mines?

A. No, sir.

MR. REED: That is to say, the Corporation is charged with its proportion of gross shipments?

THE WITNESS: Yes.

MR. REED: And with its proportion of the reserve tonnages of those mines?

THE WITNESS: Yes.

By MR. DICKINSON:

Q. Now, in the seventh column here is given reserves of other interests, January 1st, 1912. You say you compared these with other figures and verified them?

A. For each range.

Q. All the ranges herein set out?

A. Yes.

Q. Take the Gogebic range, with what original sources did you compare the figures here set out?

A. With the Finlay report.

Q. Are they summarized in the Finlay report?

A. No; the Finlay report is given by districts. I think I am wrong in my answer there. I think I compared the total of the other ranges, the old ranges, not by each company, but by each range.

Q. How about the Gogebic, did you compare that with anything?

A. No, I took the total of all the different districts in Michigan.

Q. Where did you get the Gogebic from—26,800,000?

A. That is given in the Finlay report; I did not check it. The Finlay report gives each of the mines on the Gogebic range.

Q. You mean this is given as an aggregate or this is the sum?

A. That is the sum.

Q. And did you yourself compare these?

A. I did not compare them, but our office here has compared them and made that statement up from the Finlay report.

Q. So you really did not compare these, so far as the Gogebic is concerned, with anything?

A. Not as to the 26,000,000, or the total.

Q. How about the Vermillion, did you compare that?

A. I did, yes.

Q. With what did you compare that?

A. With the Minnesota Tax Commission report, which shows the tonnage of the Vermillion. I took the Minnesota Tax Commission report which showed the 12,000,000 for the Vermillion range of the Steel Corporation's owning on the range.

Q. Are you speaking of reserves?

A. Yes.

Q. It says here "Reserves, United States Steel Corporation, January 1, 1912, 11,420,158." What did you compare that with? Where did you get those figures?

A. What is that for, the Vermillion?

Q. Yes.

A. That was taken from the Minnesota Tax Commission's report.

Q. Did you take it?

A. I didn't take it.

Q. Did you compare it with it?

A. I think I did.

Q. Do you remember that you did?

A. Yes, I did; it shows very close to it. They may not be exact figures.

Q. This is January 1, 1912. Now, where did you get this from?

A. The Minnesota Tax Commission report, 1912.

Q. For the year 1912?

A. Yes.

Q. Not for the year 1911?

A. 1912; there may be some little difference between our figures and the Tax Commission's, based on ore in stock pile, but that is very close to it.

Q. Now, take the Mahoning here, where did you get that total?

A. I didn't get it. I took it from the Finlay report, and took the different properties listed there on the Mahoning range, and that made the total of it.

Q. You compared that with the Finlay report?

A. I did not compare it with the Finlay report.

Q. You did not compare it with the Finlay report?

A. No, sir.

Q. Then some of this you did not compare with anything?

A. On the older ranges I figured we had a little over 26 per cent., on the older ranges; we had 61 and some hundredths on the Minnesota. That is what it checks with the Finlay report and the Minnesota Tax Commission report. I did not check over in detail each range.

Q. You have here the Cuyuna reserves and other interests, January 1, 1912, 417,000,000. Did you compare this figure of 417,000,000 with anything?

A. I compared it with the testimony given in this case in the last few days, by witnesses testifying as to the tonnage on the Cuyuna.

Q. Given when?

A. During the last few days.

Q. When was it made up?

A. Within the last few days.

Q. This was made up within the last few days?

A. Yes.

Q. When did you first examine it?

A. This sheet as it is made up now?

Q. Yes.

A. I think it was made up yesterday or the day before, the last day or two.

Q. Made up here in New York?

A. Yes, sir.

MR. REED: Whereabouts here in New York?

THE WITNESS: It was made in this building.

MR. REED: Written here in the company offices?

THE WITNESS: Written in the company offices here.

By MR. DICKINSON:

Q. You say you compared this with the testimony of the witnesses. Then did you base this on the testimony that you heard other people give?

A. I did.

MR. DICKINSON: This is excepted to as incompetent and irrelevant, and not given from his own knowledge.

MR. REED: You understand, Judge, that he testified on direct examination that none of this was given from his own knowledge; he simply collated it for our convenience.

MR. DICKINSON: I want to find out how much a witness will sit by and make up his testimony from the statements of other witnesses in the case.

MR. REED: That is not fair. He distinctly stated that he was not testifying from any of these figures; he simply collated those for our convenience.

MR. DICKINSON: Did you collate these yourself?

THE WITNESS: No, sir, I did not.

By MR. DICKINSON:

Q. Did you state that you collated them?

A. I had them collated; I was asked to have it done.

Q. This 417,000,000, have you heard anybody testify in this case there was a reserve of 417,000,000 as of January 1st, 1912? If so, what witness testified it?

A. I understood Mr. Zapffe to say that there was something over 100,000,000 tons actually developed, and it was probable, in his opinion, that it would amount to 417,000,000.

Q. And on that statement of his that 100,000,000 was developed and there was probably an additional amount you arrived at this figure of 417,000,000?

A. I did, yes.

Q. Did you understand Mr. Zapffe to say that there was any such amount as this shown up as of January 1st, 1912?

A. I didn't say that.

Q. What did you say?

A. I said I understood Mr. Zapffe to say there was 100,000,000 tons actually measured in operating mines, and in his opinion, based on what he knew of that range, there was about 417,000,000 developed and probable.

Q. At what time did you understand Mr. Zapffe to say that, when he gave those figures, as of what time?

MR. REED: You mean what time the ore was there?

MR. DICKINSON: What time did he refer to? Did he state that it was January 1st, 1912?

THE WITNESS: I don't remember.

By MR. DICKINSON:

Q. You do not remember any time?

A. About the present time, I understood him to say.

Q. About the present time?

A. Yes.

MR. REED: You have not been putting any into the property, have you?

THE WITNESS: Not that I know of.

MR. DICKINSON: Exception is further made to Defendants' Exhibit No. 103 as hearsay and secondary, and the testimony based thereon, it being shown that it was not prepared by the witness, but that a portion of it is based upon testimony delivered by other witnesses in this case, and therefore hearsay.

By MR. DICKINSON:

Q. Now we come to Defendants' Exhibit No. 104, entitled

"Statement showing tonnage of merchantable iron ore for Lake Superior district by ranges, January 1st, 1912." Mr. Olcott, what part did you have in making up that statement?

A. The same as in the other statement.

Q. You say the same as in the other statement. You mean by that that you gave instructions to have it made out?

A. I gave instructions to have it made.

Q. And it was made and presented to you in accordance with those instructions?

A. Yes.

Q. When was this delivered to you?

A. This has been made within the last day or two.

Q. When did you receive it in your hands first?

A. I think it was yesterday or the day before; yesterday, I think.

Q. Forenoon or afternoon?

A. I would not say.

(Whereupon an adjournment was taken until to-morrow, Tuesday, October 7, 1913, at 10:30 o'clock A. M.)

NINETIETH DAY.

EMPIRE BUILDING,
71 Broadway, New York City.
Tuesday, October 7, 1913.

Before Special Examiner JOHN ARTHUR BROWN.

Present on behalf of the United States, MR. DICKINSON and MR. COLTON.

Present on behalf of the Defendants, MR. SEVERANCE, MR. BOLLING and MR. REED; also, on behalf of the Great Northern Iron Ore Interests, MR. CHESTER W. CUTHELL.

WILLIAM JAMES OLCOTT,

the witness under examination at the taking of the adjournment, resumed the stand.

CROSS EXAMINATION (Continued)

By MR. DICKINSON:

Q. Mr. Olcott, referring to Defendants' Exhibit No. 104, a statement showing the tonnage of merchantable ore for the Lake Superior district by ranges, I understood you to say that of the Mesabi tonnage shown there about 216,000,000 of tons is of the Hill lease ore. Is that correct?

A. In the Corporation holdings?

Q. No; in the aggregate; the grand total?

A. Yes, sir.

Q. I also understood you to say that of those 216,000,000, the Hill lease ore, only that portion which remained in what you are now operating is included in the column where you assign tonnage to the United States Steel Corporation?

A. Yes, sir.

Q. And that most of that 216,000,000 is included under the other interest column?

A. Yes, sir.

Q. Of the 216,000,000 of Hill lease ore, you have included, have you not, in the column of the Steel Corporation, about 28,000,000?

A. I cannot say exactly. Something about that.

Q. That is approximately correct, is it?

A. Yes, sir.

Q. Then, in the other column of other interest, would be the difference between that and 216,000,000, which would be approximately 188,000,000?

A. Something like that.

Q. Now, Mr. Olcott, is it not a fact that on January 1, 1912, the United States Steel Corporation had not surrendered any portion of that 216,000,000?

A. We had given notice of its surrender.

Q. But, as a matter of fact, you had not surrendered it, had you?

A. Not actually. We had given notice of surrender.

Q. Then, at that time, that was January 1, 1912, the Corporation was yet in control of that 216,000,000, of which you have only assigned about 28,000,000 under the Corporation's column?

A. Yes.

MR. REED: It was a sort of a moribund control, was it not?

THE WITNESS: Yes, sir.

By MR. DICKINSON:

Q. It was a control at that time, however?

A. We had it under lease, but we had given notice of surrender.

Q. You had given notice of surrender?

A. Yes.

Q. Taking the United States Steel Corporation's holdings of ore as of January 1, 1912, on the Mesabi, you would have 860,312,061 tons as assigned in the exhibit, and also about 188,000,000 which you had not at that time turned over, of the Hill properties?

A. It would not be available after giving notice of surrender.

Q. I am just asking whether that statement was correct.

A. It was still under lease.

Q. And in your possession and control?

A. In our possession.

Q. Taking up the holdings of the United States Steel Corporation by ranges, in Minnesota, as of January 1, 1912, on the Mesabi as of that date you had the 860,312,000 as shown in that column and still under control the amount that you have shown of the unsurrendered portion of the Hill lease, which was about 188,000,000?

A. Yes, sir.

Q. In the Vermillion it is shown here that you had 11,420,000 in round numbers out of a total of 12,000,000 in round numbers?

A. Yes, sir.

Q. Assuming, according to a statement by Mr. Leith's estimates—assuming it; I am not asking you to say it is a fact but I am just asking you to assume it now as a hypothetical fact—for 1911, of 40,000,000 tons being in the Cuyuna range, what total would that give you of the then known available merchantable ores in Minnesota as of January 1, 1912, counting in the control and possession of the Hill properties which were subsequently actually surrendered?

MR. REED: Do you want him to indulge in a feat of mental arithmetic, Judge?

THE WITNESS: That is a subject of calculation.

MR. DICKINSON: I want him to help me to make out a table, just as he helped make out the other table.

By MR. DICKINSON:

Q. To shorten the matter, it would be what you have shown here in the Mesabi as belonging to the Steel Corporation, 860,000,000, increased by the approximately 188,000,000 of the Hill ores, and then 11,420,000 in round numbers of the Vermillion, and assuming that the Cuyuna proposition of 40,000,000 is correct—there is none for the Corporation in the Cuyuna, is there?

A. No, sir.

Q. The total of that would be approximately correct, would it not?

A. Assuming that basis, it would be.

Q. The only thing we assume is that Mr. Leith stated that there was 40,000,000 in the Cuyuna as of that time, 1911.

MR. REED: Where did he state that?

MR. DICKINSON: And none of that tonnage being reckoned against the corporation.

MR. REED: I have no recollection of that. He stated that that figure was used in Monograph 52.

MR. DICKINSON: I am just assuming that. I am not asking him to admit that it is correct.

By MR. DICKINSON:

Q. That would be, then, the correct setting forth of the facts, would it not?

A. I presume it would, if you make those assumptions.

Q. Well, the only assumption that I make there is as to Mr. Leith's statement. The other is based upon your statement.

A. It is a matter of figures.

Q. The Corporation's holdings, however, would be based upon what you give in the column here for Mesabi, increased by the unsurrendered portion of the Hill, which was approximately 188,000,000, and what you give for the Vermillion?

A. That is what it would be if you want to make that total up in that way.

Q. Is there anything incorrect in making it up that way?

A. Yes.

Q. In what way?

A. It may be that the Corporation held this under lease legally, but having given notice of surrender, that they were going to give that up, they did not hold it morally.

Q. They did not hold it morally?

A. No, sir; they were not available.

Q. What do you mean by morally—lawfully?

A. No, they agreed to give them up, and it was the intention to give them up, and not work them; therefore they were not available.

Q. They did work some of them, after that?

A. Only the ones we were operating. In March of 1912 we returned to the Hill interests all of their lands and all of their properties with the exception of those we were operating.

Q. Did you turn over any that you were operating?

A. No.

Q. You held on to all of them?

A. Yes.

Q. You spoke of putting in drill holes on the Cuyuna range for the purpose of exploration, to determine whether or not you would take seventeen options there. What was the aggregate cost of that exploration?

A. About $102,000.

Q. How much?

A. Approximately $102,000.

Q. What mines did you control for this purpose? What were the names of the mines?

A. They did not have any mines. They had no names. We were drilling them. They were options on Government descriptions.

Q. Did you get any ores in these drill holes?

A. Yes.

Q. What was the iron content that you got there, and what was the percentage of phosphorus?

A. The iron was a little lower grade than we had on the Mesabi range, and the phosphorus; it was non-Bessemer; practically all of it was non-Bessemer grade.

Q. Can you state what was the actual percentage of iron content?

A. No, I cannot tell exactly; two or three per cent. less than on the Mesabi.

Q. You mean less than the non-Bessemer on the Mesabi?

A. Yes; it would run probably 55 or 56 per cent., as near as I can say now.

Q. You were asked how the Steel Corporation's requirements of Bessemer compared in proportion with the requirements of these steel companies that have been built up in the last ten years and your answer was, at page 12129:

"All of the furnaces and steel plants that have been built of recent years, more recent years, are open hearth plants and do not require the Bessemer ores," etc.

Now, what did you understand by "have been built up," and in your answer what did you mean by the expression, "Steel plants that have been built"? Did you mean plants of

existing companies, or did you mean new companies that were formed that had not before existed, and if so state what they are and at what times those companies were formed, and what their capacities were?

A. I meant both; I meant the new companies were building in recent years open hearth plants, where they used non-Bessemer ore, and the extensions of old plants were mostly open hearth.

Q. What new companies, when you speak of recent years, did you have in mind when you answered that question?

A. I stated that as a general proposition. I am not in the steel business, but I know in a general way that the steel plants built in recent years, not only by the independents, but by the Steel Corporation, are open hearth plants, and that the demand is for open hearth steel, which is increasing.

Q. But you cannot name any new steel concern which you had in mind when you answered that question, as having been built up in recent years?

A. The Inland Steel Company plant at Chicago is open hearth.

Q. When was that created?

A. The recent improvements are open hearth.

Q. I am not speaking of improvements of existing corporations.

A. Well, I was.

Q. But I understand that you spoke of both classes.

A. Yes.

Q. Some that were enlarged and others that began their existence. Which of those that began their existence in recent years did you have in mind when you answered that question?

A. I did not have any definitely; I had general information.

Q. And you cannot name any?

A. Not right now, but I could probably get them if it was necessary.

Q. When you answered that question you did not have any particular ones in mind?

A. No; only in general.

Q. Not in particular?

A. Not in particular.

Q. When you spoke of open hearth plants having been built in recent years state what percentage of those open hearth plants, the percentage of the whole, has been built by the Corporation.

A. I cannot state. I am not here as a steel expert; I have nothing to do with the manufacture of steel or the operating of the plants, but the furnishing of the ore for the plants, and I am not here testifying as an expert on steel plants. My operations are confined to mining operations and the furnishing of such ore as our people require for their furnaces.

Q. And that is all you claim to be competent to testify on?

A. That is all I claim to be competent to testify on.

MR. REED: That is a fairly big job of itself, is it not, Mr. Olcott?

THE WITNESS: I think so.

MR. COLTON: You enlarged him a little bit.

MR. DICKINSON: That is all.

RE-DIRECT EXAMINATION

By MR. REED:

Q. Judge Dickinson has called your attention to the fact that more Bessemer ore was found on the Hill properties than was estimated by Mr. Sebenius in February, 1907. I want to ask you whether that estimate made in February, 1907, was intended to embrace all of the lands of the Hill lease or only those which had been developed.

A. That estimate was based upon exploration data that was furnished us by the Hill people, and the tonnage of Bessemer ore was based entirely upon those figures, and those explorations only covered a meagre portion of the Hill lands.

MR. DICKINSON: What estimate do you refer to now, Mr. Reed? I object to that question and answer because it does not show what particular estimate was referred to.

THE WITNESS: That is the estimate of 175,000,000.

MR. REED: I think it shows pretty clearly, as Mr. Se-

benius' estimate of February, 1907, showed 30,000,000 of Bessemer ore, which you have already put in evidence.

MR. DICKINSON: That is the one you are referring to?

MR. REED: That is what I set out in the question. That is all.

MR. REED: Mark that as an exhibit, please (handing paper to stenographer).

That will be marked as a Government exhibit for identification; Government Exhibit No. 438, for identification.

(The paper was marked Government Exhibit No. 438.)

MR. REED: Judge Dickinson, Mr. Crawford has sent me a statement of purchases by the Seminole Land Company, which has been marked Government Exhibit No. 438 for identification. This is in response to your request of him in cross-examination for such a statement. It includes the prices paid and all information and statistics with regard to the Seminole properties.

MR. DICKINSON: Was it marked as an exhibit?

MR. REED: I asked the stenographer to have it marked as an exhibit so we might have a record of it.

MR. DICKINSON: For identification?

MR. REED: Yes, for identification only.

MR. DICKINSON: Very well.

MR. REED: Mr. McKinney, will you be sworn?

PRICE McKINNEY

was called as a witness on behalf of the defendants, and being first duly sworn, testified as follows:

DIRECT EXAMINATION

By MR. REED:

Q. Mr. McKinney, where do you live?

A. Wickliffe, Ohio.

Q. That is near Cleveland, is it?

A. Just out of Cleveland.

Q. What is your business?

A. Miner of ore and seller of ore and manufacturer of iron.

Q. How long have you been in the ore business?

A. For some 25 years.

Q. With what company or partnership did you begin business?

A. With Corrigan, Ives & Company, first.

Q. In what year was that?

A. That was in 1889.

Q. And did you remain with that concern as long as it lasted?

A. Yes, as an employe.

Q. Then with what company or partnership were you associated?

A. The partnership of Corrigan, McKinney & Company was formed in April, 1894.

Q. And you were a partner in that at its formation?

A. I was and still am.

Q. And your experience in that business has been continuous then since 1889?

A. Yes, sir.

Q. What was the nature of your employment by the firm of Corrigan, Ives & Company?

A. I was a salesman and sort of an outside man.

Q. Salesman of what?

A. Iron ore.

Q. Did you have any experience in those days on the ranges in Michigan?

A. Some.

Q. That was before the discovery of the Mesabi, was it not?

A. The Mesabi was discovered in 1892—the first shipments from the Mesabi.

Q. And were you familiar with the mines of that partnership at that time?

A. That partnership had no mines. It was a commission house and sold ores on commission.

Q. It operated no mines on the ranges?

A. No.

Q. Did Corrigan, McKinney & Company, after its formation, acquire any mines in the Lake Superior district?

A. Yes; ultimately on all the ranges.

Q. About when did you begin to buy mines in that district?

A. I think at once. We did not buy them; we got leases of them in the early days, I should say at once after the formation of the firm.

MR. DICKINSON: What date was that?

THE WITNESS: That was in 1894.

By MR. REED:

Q. And have you since purchased or leased mines?

A. Yes, sir.

Q. By "you" of course I mean the partnership.

A. By the partnership; or rather, taken mines and made corporations which the partnership owned or controlled.

Q. Yes. At the present time have you any intimate personal knowledge of the mines controlled by the firm of Corrigan, McKinney & Company?

A. Oh, yes.

Q. You have been in the mines, have you?

A. Very frequently.

Q. Through the workings?

A. Through all of them, I think.

Q. Just at this point, Mr. McKinney, I wish you would state whether you have any connection with the United States Steel Corporation.

A. I have not.

Q. Has the firm of Corrigan, McKinney & Company any connection with the Steel Corporation?

A. Absolutely not.

Q. Is the Steel Corporation interested in Corrigan, McKinney & Company?

A. In no way.

Q. Is Corrigan, McKinney & Company interested in the Steel Corporation?

A. Not in any way.

Q. Have you at the present time any contracts with the

Steel Corporation for the sale of ore to it or any of its subsidiaries?

A. I never have had any contracts with the Steel Corporation, except that when the Steel Corporation was formed we had some contracts with two or three customers—term contracts, running, if I remember rightly, ten years; one with W. P. Snyder, and one with the Union Steel, I think they called it; W. H. Donner was president, and those contracts were taken over by the Steel Corporation, or whatever subsidiary took them over; I do not know, and they were performed.

Q. Of course you understand, Mr. McKinney, when I speak of contracts with the Steel Corporation, I mean either with it or with any of its subsidiaries?

A. Yes. Since then we have sold nothing to the Steel Corporation. The only other transaction that we have had is a transaction which is in the process of performance now. We are building a steel plant ourselves, and we required about 17,000 tons of structural steel erected. We sent out for open bids, and the American Bridge, if that is the name of it——

Q. Yes.

A. The American Bridge Company were the lowest bidders, and we gave them the contract and they are erecting the steel now.

Q. Mr. McKinney, your firm has mines on the Mesabi range, has it?

A. Yes, sir.

Q. Will you give us the names of those mines?

A. The Stevenson, the Commodore, the St. James and the St. Paul. I think, in addition to that, we have some explorations. I think they have not been taken under lease.

Q. Which of these four mines are now operating?

A. The Stevenson and the Commodore are operating. The St. Paul— I do not know whether you would call it in operation or not. I think this is the fourth or fifth year we have been engaged in taking off the stripping. We have taken off, on the average, a trifle over 100 feet, and it is just about reaching completion.

Q. How about the St. James? Is it operating?

A. No; it has a shaft and is equipped, but it is not operating. It is and always will be an underground proposition.

Q. On the Gogebic range what mines have you?

A. The Ironton and the Colby.

Q. How deep are the workings on the Ironton?

A. 1,750 feet, I am nearly sure.

Q. How deep are the workings on the Colby mine?

A. About 100 feet less.

Q. Those are both on the Gogebic, I think you said?

A. Yes, sir.

Q. How about these Gogebic mines; do they deteriorate or improve or remain constant in quality and width as you go deeper?

A. Oh, I think they vary; the quality, I think, is practically the same, I should say, on the average. In individual cases possibly it may not be so good, and in other cases better. The width I should say increases with the depth; although I think that is individual also to the different mines.

Q. How about this Colby mine? Is that an old mine?

A. I think it is one of the first mines operated on the Gogebic. I think it was opened in 1885 or 1886.

Q. When did your firm get control of the Colby?

A. About 1894 or 1895. I am not positive absolutely as to these dates, but it was about that time.

Q. Have you been operating it ever since?

A. Yes.

Q. How does it compare now as a mine with its condition when you first took it about 1894?

A. I think it was 1895 or 1896.

Q. Well, 1895 or 1896, then?

A. The Colby was an abandoned mine when we took it.

Q. Is it a good mine now?

A. We think so.

Q. How do its reserves in sight compare with the reserves in sight then?

A. It had practically no reserves in sight then. We took the operation to gopher it out, to get the ores that had been left in pillars and workings. That was the idea we had when

we first took the property. It developed into rather a fair property, we think.

Q. How deep were the workings in 1895 and 1896 when you got it?

A. I am not positive of that. From my recollection I should say not to exceed five or six hundred feet, if that. It had been operated right along as an open pit. I think it was the first mine on Lake Superior in which the steam shovel had ever been used; the only mine, in fact, on the Gogebic range.

Q. How about your two mines on the Gogebic? Are they operating now?

A. Yes.

Q. Up to their full capacity?

A. No, sir.

Q. Why are they not operating to their full capacity?

A. Because we have not the customers. Frankly, if you bring up the ore and pile up big stock piles there, the Tax Commissioners get after you and it becomes burdensome. I am honest with you on that.

Q. So, if you cannot sell it, it is better not to operate than to put it in a stock pile?

A. Yes. We are shipping two stock piles that were accumulated last winter.

Q. Let us go to the Menominee range, and by that I mean to include the Iron River and the Crystal Falls districts, which we have been told are in a sense an extension of the Menominee.

A. They are both a part of the Menominee.

Q. Will you tell us what mines you have in the Menominee district?

A. The Armenia, the Great Western, the Lincoln, the Paint River, the Kimball, the Genesee, the Tobin, the Dunn, the Baker, the Tully, the Blair, the Michaels; I think that includes what we have, with some option on grounds.

Q. These are the mines you are speaking of here?

A. Yes; those are the mines.

Q. Is the Armenia working?

A. Yes.

Q. Is the Dunn working?

A. Yes.

Q. Is the Baker working?

A. Yes.

Q. Is the Tully working?

A. Yes, sir.

Q. How about the Tobin?

A. We closed it down this summer.

Q. How about the Great Western?

A. It has been closed down for five or six years. There is our horrible example on the tax question. We had 350,000 tons in the stock pile, and it has been there five or six years, and eaten its head off.

Q. How about the Kimball?

A. The Kimball is idle; it has a small stock pile.

Q. How about the Genesee?

A. The Genesee is operated jointly with the Tobin; they are adjoining properties, but belong to different fee owners.

Q. Is it shut down now as the Tobin is?

A. Necessarily, yes.

Q. How about the Lincoln?

A. It is shut down.

Q. The Paint River?

A. It is closed.

Q. How about the Blair?

A. We have never operated the Blair; never put a shaft into it yet. It is simply thoroughly drilled and thoroughly taxed.

Q. How about the Michaels?

A. The same as the Blair.

Q. Why are so many of your mines shut down on the Menominee, Mr. McKinney?

A. There is no use in operating a mine if you can not sell the ore.

Q. In these mines, can you tell me the approximate depths to which the workings have gone? Take the Armenia?

A. The Armenia is a faulted shallow deposit of what we think we have found to be the edge of the formation, the ore bearing formation, and it is in small bunches and shallow. I think we are down four or five hundred feet.

Q. How about the depth of the Dunn?

A. The Dunn is a very old mine; it is deep.

Q. Can you give us the approximate depth, or an approximate idea of its depth?

A. Between 1,600 and 1,700 feet; I should say possibly quite 1,700 feet. We are sinking another level now.

Q. How far down are the Baker and Tully?

A. The Baker is down 500 feet. The Tully is the adjoining property and we are putting two shafts there, have just completed putting two shafts down, and that is shallower. It is new property and just opening up.

Q. In the Tobin how far down have you gone?

A. I should say 1,250 feet.

Q. In the Great Western how far down?

A. About the same; I think we are between the twelve and thirteen 100-foot levels.

MR. DICKINSON: 1,250 feet?

THE WITNESS: These figures are not absolute. I can get them correctly, but they are approximately correct. I cannot carry these exact figures of various properties, but they are approximately correct.

By MR. REED:

Q. How about the Kimball?

A. The Kimball was equipped and we got down two or three hundred feet, and we got quite a little stock pile there and stopped.

Q. The Genesee?

A. The Genesee is operated jointly with the Tobin and has the same depth, of course, as the Tobin.

MR. DICKINSON: 1,250 feet?

THE WITNESS: Yes, all the Genesee ore is hoisted through the Tobin shaft, and it is practically one mine really, but it is kept separate. All our properties are leaseholds, and the fee of the Genesee and the Tobin are owned by different people.

By MR. REED:

Q. How deep has the Lincoln gone?

A. The Lincoln is not much of a property; it adjoins the Great Western. I should say four or five hundred feet. Everything taken out in recent years was hoisted through the Great Western shaft.

Q. And the Lincoln workings have gone to the same depth as the Great Western?

A. No, not so deep.

MR. DICKINSON: No, he said 500 for the Lincoln and 1,250 for the Great Western.

THE WITNESS: I said 1,250, and the Lincoln adjoins the Great Western.

MR. DICKINSON: But you said 500 for the Lincoln and 1,250 for the Great Western.

THE WITNESS: I should say that is approximately correct for the Lincoln. I say that the ore in the Lincoln played out at some of the upper levels, and the last ore that came from the Lincoln was hoisted through the Great Western shaft.

By MR. REED:

Q. How about the Paint River?

A. It is practically done for. There is a deposit lying between the Paint River and the Lincoln, which is called the Fairbanks. That we have done some work on, and there is some possibility of getting a mine, but the Paint River property I think is done and finished.

Q. How about the Blair and Michaels?

A. They are a couple of explorations over on the Iron River district, on which a good tonnage of ore has been developed by diamond drilling, but no shaft work has been done. They will lie until such time as we find use for them.

Q. On the Marquette range have you any mines?

A. One small property.

Q. What is its name?

A. The Star West.

Q. Is it active?

A. No, sir.

Q. What is the total assessed tonnage of all these mines that you have given us?

A. I do not quite get you.

MR. DICKINSON: I do not understand that.

MR. REED: I mean what is the total of the tonnages assessed against these mines by the tax commissions of the states in which the mines are located?

THE WITNESS: Approximately 25,000,000 tons; that is according to my best memory. It may vary from that, but not much.

By MR. REED:

Q. About how much are you taking from those mines this year?

A. The total?

Q. Yes.

A. Approximately 2,500,000.

Q. About how much are you taking from those mines on the Menominee range?

MR. DICKINSON: Does your question as to the assessed property only apply to the Marquette?

THE WITNESS: My answer was to apply to all of them, the Michigan and the Minnesota both.

MR. REED: That question applied to all of them, I think you will see.

(The pending question was repeated by the stenographer.)

THE WITNESS: We are shipping roughly, I should say, five to six hundred thousand tons.

By MR. REED:

Q. How much could you ship from these Menominee mines alone, if they were all working?

A. There are some of them equipped to ship and some of them that would have to be equipped to get a production.

Q. Let us confine ourselves first to those mines that are equipped to ship at the present time.

A. Why, we should be able to hoist 6,000 tons a day from the Tobin, the Genesee, the Great Western, the Dunn and the Tully and the Baker.

Q. How many days during the year is it possible to work those mines?

A. Every day in the year from these mines because they are underground mines. We do not work Sundays. That would make about 300 days I should say.

Q. That is, the mines which are equipped for shipping have a capacity of about 1,800,000 tons a year, if my arithmetic is correct?

A. Allowing for delays or accidents or things of that sort, I should say a million and a half, or a million, eight hundred thousand tons, or two million.

Q. And is it from those mines that you are now shipping these 600,000 tons which you are sending out from the Menominee?

A. No, sir; we are shipping from the Tobin, the Dunn, the Baker and the Tully.

Q. Why are you not shipping up to your full capacity from the Menominee mines?

A. We are shipping up to our full requirements.

Q. In other words you cannot sell the balance?

A. I have not been able to.

Q. How about your mines on the other ranges; are they shipping to full capacity?

A. Just at present—the Mesabis are, yes.

Q. How about the Gogebics?

A. No, they are not, but the Mesabis are shipping to their full capacity.

Q. Have the Mesabi mines been shipping to their full capacity for several years or is that just at this time?

A. In some years they have shipped to their full capacity and some years not. We were a little short in our car supply early in the season on the Mesabi, and we are shipping to the extent that we can get railroad cars.

Q. Now, going back through your experience in the ore business, back to the year 1889, has there ever been a year in which you have been able to sell all of the ore that your mines could produce?

A. Yes, there have been years when we could sell all the ore that certain mines produced.

Q. That was not the question I asked you. Have you ever

been able to sell the whole of the capacity of your company?

A. Not yet.

Q. What is your total capacity for all ranges?

A. Oh, I don't know. Take the open pit mines, take from one of our open pit mines, they shipped I think one year 1,600,000 tons. I think we once mined there, when the boys tried to make a record, 21,800 tons in eighteen hours. With the open pit mines it is simply a question of car supply and steam shovels, if you have faces enough for your steam shovels to work.

Q. Of recent years have you been able to sell up to the capacity of your mines?

A. No. We have been taking on properties.

Q. You have been taking on new properties?

A. Yes, sir.

Q. In recent years?

A. Yes, sir.

Q. How lately have you leased or bought new properties?

A. Oh, this year. We are always—we are constantly exploring. On the Menominee range particularly it is a formation that has not much to indicate whether you will get ore or not, and we are always taking likely ground and sticking drill holes down, and sometimes we get something and sometimes we do not.

Q. Have you made any plans for disposing of this surplus of ore that you have been unable to sell, Mr. McKinney?

Mr. Dickinson: I object to that as incompetent and irrelevant.

By Mr. Reed:

Q. Will you answer, please?

A. I do not know in the way you put it—that I am unable to sell. We have been forced—we were originally purely a mining outfit, and as we got along, we had customers who bought a lot of ore from year to year, and they either got mines of their own or some of the other concerns who were similarly operating to ourselves, adopted the policy of interesting an operator, a furnace operator, I mean, in mining

operations. Our policy had been to keep our own business to ourselves—the ownership, I mean, and we lost a great many customers through their acquiring mines or acquiring interests in mines, so we started and built some blast furnaces, and we are operating six now. We are building two more blast furnaces, and we are building a steel plant at Cleveland, Ohio.

Q. Where are you building the steel plant?

A. At Cleveland, Ohio.

Q. Have you actually started work on it?

A. Yes, sir.

Q. Spent some money on it?

A. Yes, sir.

Q. And made contracts for spending more?

A. Yes, sir.

Q. At the present time how much do your outstanding contracts call for in expenditure?

MR. DICKINSON: I object to that as irrelevant and incompetent.

THE WITNESS: Oh, unless people insist on it, I do not believe I want to tell.

By MR. REED:

Q. Then let us put it this way: When your present plans are completed and the work now under way is completed, what will you have put into the plant? Is that a better way of putting it?

A. I do not see that that has any bearing on the interests of either party here.

Q. Well, you will have to let others decide that, Mr. McKinney.

A. I know——

Q. (Interposing) I do not want to intrude unnecessarily into your private affairs. Is there any way in which you can give us an idea of the size of this steel plant which you are building?

A. Yes.

Q. That is all I want.

A. All right. We are building two 500-ton blast furnaces.

We will take the hot metal from these blast furnaces—the furnaces are on one side of the river—these blast furnaces, and the steel plant is on the other. The government has given us a permit, and we are now building a bascule bridge, a jackknife bridge, across the river, over which we will take the hot metal and put it into the mixer for use in the open hearth furnaces.

Q. How many open hearth furnaces are you building in that plant?

A. Eight, initially, to start with.

Q. And how many more, if any, do your plans contemplate eventually?

A. Why, it contemplates two processes. By duplexing, that is, using the Bessemer process first and then using the metal from the Bessemer converters in the open hearths, it would about double the capacity of the present plant, or we can, I think, add six more open hearth furnaces, if we decide to use only the open hearth method.

MR. DICKINSON: That is six to the eight?

The Witness: Yes, that will be six to the eight, the open hearth furnaces.

By MR. REED:

Q. What is the estimated capacity per day in steel ingots of the plant as you will build it, with the eight open hearth furnaces?

A. Approximately 1,500 tons.

MR. DICKINSON: How much?

THE WITNESS: 1,500 tons, approximately.

MR. DICKINSON: Is that a day?

THE WITNESS: A day; yes, sir.

By MR. REED:

Q. When do you expect these furnaces to be completed, Mr. McKinney?

A. We hope to be making billets, slabs and sheet bar by January 1, 1915.

Q. A large part of this work has been done already, has it not?

A. No, we have been delayed. The foundations are in for the big building, the open hearth building, and they are erecting the steel. It is all built down in the swampy ground of the river bottom, and everything has to be built on piles, and last winter the piling contractor brought in his piles and piled them up there, and when the flood came the flood scattered them from Toledo to Buffalo, and he did not get many of them back, and he explained the delay, that he could not get new piling in because the farmers were plowing their corn or planting their corn.

Q. Anyway, you were delayed?

A. So we were delayed about three months, but I think we will make steel there not far either way from January 1, 1915.

MR. DICKINSON: Nineteen what?

THE WITNESS: Fifteen.

By MR. REED:

Q. What kind of steel do you expect to start making? To what degree of completion do you expect to bring your product? That is, will you make finished or semi-finished products?

A. We will have to make the semi-finished product; of course, you have to make billets before you can do anything. We will go to the finished product finally. I do not know what we will make, but probably—that does not matter. We will make whatever we can sell—needles or anchors.

Q. What products will you sell at first? That is, do you expect to sell billets?

A. I expect to sell billets all the time, if I can find a market.

Q. Sheet bars?

A. If I can find a market.

Q. You are putting in a blooming mill, are you?

A. Yes, sir.

Q. Now, if it is not intruding too far into your private affairs, Mr. McKinney, I would like to know whether the money that you are putting into this plant is secured by a bond issue or loans from other people, or whether it is your own money.

MR. DICKINSON: That is objected to as irrelevant.

MR. REED: But I do not insist on the question, if you have the least reluctance about answering it.

THE WITNESS: I guess we will raise the money ourselves.

By MR. REED:

Q. You have not put any bond issue on the plant yet?

A. There is a bond issue on none of our plants, except one, which is a heritage. No, we do our business with our own money, as a rule; have so far.

Q. How much ore will this plant require each year?

A. You mean the steel plant; the iron that goes——

Q. (Interposing) The iron that goes into the steel plant, of course comes from the furnaces. Now, to make that iron, how much ore will be required each year?

A. There will be 450,000 tons, approximately, of——

MR. DICKINSON: (Interposing) How much did you say?

THE WITNESS: I am making a mental calculation now. Somewhere between six and eight hundred thousand tons.

By MR. REED:

Q. Per year?

A. Per year, of ore?

Q. Yes.

A. It would depend, of course, on how much iron we used in making the steel, and how much scrap.

Q. All open hearth works use a large proportion of scrap in their mixture, do they?

A. As I understand, it is the general practice, and I think necessary.

Q. Now, in addition to the requirements of the furnaces that supply the hot metal for this steel works, do you have other furnaces that will require ore?

A. Yes, sir.

Q. About how much will the total annual requirements of all of your furnaces come to, after this new construction is completed? I am speaking of ore requirements now.

A. Roughly, a million and a half.

Q. Do you expect to supply that from your own properties?

A. Yes, sir.

Q. Have you any apprehension of a failure of your ore reserves for this plant that you are building, Mr. McKinney?

MR. DICKINSON: I object to that as not a competent question, and as not calling for the facts; a mere prophecy of the witness, not based upon any data or expert knowledge.

By MR. REED:

Q. Will you answer it, please?

A. If I had, I would not be putting the money into this big plant.

By MR. REED:

Q. Have you any surplus ore that you are willing to contract to sell?

A. We always have.

Q. Mr. McKinney, bearing in mind the quantity of ore that will be required for your furnaces, how much ore would you be willing, now, to contract to sell to a responsible consumer for annual deliveries, over a period of let us say ten years?

MR. DICKINSON: That is objected to because it does not include anything in regard to price, or what is meant by a "responsible consumer," and it is too vague and indefinite.

By MR. REED:

Q. Now will you answer, please, Mr. McKinney?

A. I have had a lot of grief from some of these long time contracts, and we have had them, probably, more than anybody. If we could agree on price, and the contract was absolutely definite, I would sell a million and a half for ten years.

Q. That is, a million and a half a year?

A. Yes, sir.

Q. For ten years?

A. Yes, sir. When I say "I" in my answer, I am talking for Corrigan, McKinney & Company, and not for myself personally.

Q. Mr. McKinney, where are you going to secure your coke for these new furnaces? Will you make it yourself or will you buy it?

A. We are buying coke at present, and probably shall buy some coke for some time to come. In the building of this steel plant we are including a by-product coke plant, and to the extent of its capacity, we will use that coke.

Q. What will its capacity be per day?

A. You mean in coke or by-products?

Q. I mean in coke?

A. About 1,000 tons.

Q. Where will you obtain the coal for supplying that by-product coke plant?

A. We have some coal lands in Pennsylvania from which we shall probably get a part of it. We will probably mix Pennsylvania and either Virginia, West Virginia or Kentucky coal with it.

Q. Whereabouts in Pennsylvania are your coking coal lands located?

A. In Indiana County.

Q. What seam of coal, or what measure do you expect to mine your supply from in Indiana County?

A. From the Upper Freeport measure, I think it is called, and, if we have it down at depth, the lower Freeport measure.

MR. REED: You may cross examine, Judge.

MR. DICKINSON: No cross examination.

JAMES T. HALE

was called as a witness on behalf of the defendants, and being duly sworn, testified as follows:

DIRECT EXAMINATION

By MR. SEVERANCE:

Q. Where do you live?

A. Deerwood, Minnesota.

Q. How long have you lived in Minnesota?

A. Since 1884.

Q. What is your profession?

A. Originally attorney at law; now prospecting for iron ores.

Q. You have been interested in mines for a great many years, more or less?

A. Since 1889.

Q. You were formerly engaged in the practice of your profession at Duluth?

A. Yes, sir.

Q. And how long did you practice law there?

A. Five years.

Q. What year did you say you went to Duluth?

A. 1884.

Q. Were you interested at an early day in the Mesabi range, in the properties on that range?

A. I was.

Q. And with whom were you associated? How did you happen to get into it?

A. I was associated with the Merritts and others. I was then looking for ores, before I quit practicing.

Q. You say you were associated with the Merritts; whom else were you associated with at the same time?

A. Matthew Bland Harrison, K. D. Chase, and quite a number of others in a small way.

Q. You remember the inception of the Duluth, Missabe and Northern Railway?

A. I do.

Q. What if anything did you have to do with the organization of that company?

A. I drew their articles of incorporation, and was their first secretary and their first counsel.

Q. And one of the incorporators?

A. One of the incorporators?

Q. Previous to that, at the time of the incorporation of that railroad, had there been any discovery of iron ore on the Mesabi range?

A. Yes.

Q. Whereabouts?

A. At the mine that is now known as the Mountain Iron; the Oliver—known then as the Oliver—I do not know whether

it is changed now or not, at Biwabik, and the Hale, Cincinnati, and Kanawha.

Q. Was that all before the organization of that railroad?

A. Yes.

Q. Was there at that time any railroad that reached the Mountain Iron and these other mines?

A. There was not.

Q. What efforts, if any, were made to your knowledge, by these gentlemen with whom you were interested, to secure the construction of a railroad to those mines?

MR. DICKINSON: I object to that as irrelevant and incompetent.

THE WITNESS: There was constant effort made from almost the first discovery of iron there to get a railroad into the properties by the Merritts and people who were interested in the discoveries there.

By MR. SEVERANCE:

Q. Including yourself?

A. Yes, sir.

Q. And Mr. Chase?

A. Yes.

Q. What trunk line railroads, if any, did you gentlemen approach to build into that country?

MR. DICKINSON: We object to that as irrelevant and incompetent.

THE WITNESS: All those that were in that section of the country that came into Duluth, that we thought it would be possible to interest in building to those mines, as well as the Duluth and Iron Range which crossed to the east of all of these properties that were developed, some of the first developments, twenty or thirty miles east of the first developments on the Mesabi range, and all the other railroads that came into Duluth.

By MR. SEVERANCE:

Q. You tried to get the Duluth & Iron Range—we will take them up in order—you tried to get them to build in?

A. Yes.

Q. Did they decline to do so or were they willing to do so, and if they declined what was their reason?

MR. DICKINSON: Objected to as irrelevant.

THE WITNESS: They declined to do so because they said there was nothing in there to warrant building a road, even a branch line of their own line into those properties.

By MR. SEVERANCE:

Q. What other lines did you approach that were located in that territory?

A. The old St. Paul & Duluth; that was a short line from St. Paul and Minneapolis to Duluth.

Q. Now owned by the Northern Pacific?

A. Now owned by the Northern Pacific.

Q. You say you approached the St. Paul and Duluth and also the Northern Pacific?

A. Yes; they were separate then.

Q. Where did their lines run?

A. Both ran into Duluth.

Q. Which direction did the Northern Pacific go from Duluth?

A. It went directly west.

Q. It went out through Brainerd and that way?

A. Out through Brainerd.

Q. What other lines?

A. The Duluth & Winnepeg had a line up there, I think to Winnepeg. Well, not to Winnepeg, but up part way.

Q. On the road to Winnepeg; they never got that far?

A. No; they were not able to do it.

Q. They sold out to the Great Northern?

A. They sold out afterwards to the Great Northern.

Q. You say you approached all these different lines; and what was your success in inducing them or any of them to build a road up to those mines?

MR. DICKINSON: Mr. Severance, suppose you agree that these objections shall be continuing ones.

MR. SEVERANCE: Yes; I understand you claim all this testimony is immaterial.

MR. DICKINSON: Yes, and we except to all testimony of this character as irrelevant and incompetent.

THE WITNESS: We did not succeed with any of them.

By MR. SEVERANCE:

Q. What further steps did you gentlemen take then to secure the building of a road?

A. We went to people who were not railroad men to get them to put up the money to build a railroad to the mines, and we did not succeed with them.

Q. How did you finally succeed in getting the road built, so far as it was built when you were connected with it?

A. There was a contractor in Minnesota, Donald G. Grant, and I think Mr. Guthrie was interested with him. Grant had the equipment.

Q. He was a friend of one of your partners?

A. He was a friend of one of my partners, K. D. Chase.

Q. Living in the same town?

A. Living in the same town, Faribault, Minnesota, and Mr. Chase through his influence with Donald Grant succeeded in getting him to take hold of it provided the people who were interested in the mines would join in with Mr. Donald Grant in building the road, he having the equipment and everything that was necessary in that way to go ahead with it.

Q. Where was it first proposed to build, and what was built pursuant to that first decision?

A. The line was built from Stony Brook, out of Duluth some distance, starting from this road from Duluth to Winnepeg.

Q. You mean the road the Duluth and Winnepeg?

A. It did not go to Winnepeg, but that was the name of it. The road was built from Stony Brook on that line to the Iron Mountain mine, practically straight north.

Q. About how far was that?

A. Oh, that is about fifty or sixty miles.

Q. By the way, you say you attempted to get private persons to asist the mine owners in building that road. Did you or any of your associates make trips to different parts of the country for that purpose?

A. Yes; I made only one. Mr. Chase made quite a number, I believe, and he reported to the directors from time to time. I personally was only on one of those trips.

Q. And this final arrangement which was made by which the mine owners themselves financed the undertaking with Mr. Grant was after you had failed to get anybody else to do it?

A. Yes.

Q. And what was the purpose of building that line of road?

A. To bring the ore down from the ranges.

Q. Was there any other reason for it except as an ore road.

A. No, as an ore road.

Q. To get the ore to market?

A. Yes.

Q. After you left the road it was extended down to Duluth by the Merritts and some of their associates, wasn't it?

A. Yes.

MR. SEVERANCE: That is all.

MR. DICKINSON: We will let it stand at that.

MR. REED: Mr. Sebenius, will you take the stand, please?

JOHN U. SEBENIUS

was called as a witness on behalf of the defendants, and being first duly sworn, testified as follows:

DIRECT EXAMINATION

By MR. REED:

Q. Mr. Sebenius, where do you live?

A. Duluth, Minnesota.

Q. How long have you lived there?

A. I have lived there since 1892.

Q. What is your occupation?

A. Mining engineering.

Q. What connection, if any, have you with the Oliver Iron Mining Company?

A. I am general mining engineer of the Oliver Iron Mining Company.

Q. How long have you been general mining engineer of the Oliver Iron Mining Company?

A. Since the formation of the Corporation.

Q. I call your attention, Mr. Sebenius, to Defendants' Exhibit No. 102, statement of iron ore properties in the Lake Superior District held by the United States Steel Corporation. Are you able to state at whose request that statement was prepared?

A. It was prepared at the request and direction of the president of the Oliver Iron Mining Company.

Q. That is Mr. Olcott?

A. Mr. Olcott; yes, sir.

Q. And under whose direction was it prepared?

A. My direction.

Q. What source of information was used in order to get the tonnages as of January 1, 1912?

A. The tonnages were obtained through the Tax Commission of the State of Minnesota.

Q. As to the ranges in Michigan, what was the source of your information?

A. Mr. Finlay's report.

Q. That is the report printed in the Michigan Tax Commission's report for the year 1911, is it?

A. Yes, sir.

Q. Already in evidence in this case?

A. So I understand.

Q. What was the source of your information as to the tonnages in Wisconsin?

A. We have information as to the tonnages there.

Q. I assume that you have or you would not have put it in the statement, but I asked you what the source was.

A. Well, we have a report as to the tonnages the Tax Commission assessed against these properties. We have a report that shows the tonnage.

Q. Is that the tonnage assessed by the Wisconsin Tax Commission?

A. Yes, sir.

Q. Has that report been printed and published?

A. It has not.

Q. From what office did you obtain the information as to the Wisconsin estimates?

A. I obtained that from the general manager of the Oliver Iron Mining Company.

Q. What governmental office did you obtain it from?

A. The local assessor.

Q. The local assessor?

A. Yes, sir.

Q. Is he an officer under the Tax Commission?

A. Yes, sir.

Q. What is the total tonnage shown by the Wisconsin assessment?

A. 3,400,000.

Q. Does the Steel Corporation own any of that tonnage?

A. No. It is a very small tonnage.

Q. It is inconsequential in the totals, is it?

A. Not very important.

Q. What year's estimate did you use on the Minnesota ranges?

A. 1912.

Q. Where did you get the figures for the 1912 estimate in Minnesota?

A. From the State Tax Commission of the State of Minnesota.

Q. Have they printed and published that report?

A. Yes.

Q. Have you that report in your possession?

A. It is down in your office.

Q. You can get it after lunch, can you?

A. Yes, sir. The report does not give the detail of the tonnages. It gives a summary of the tonnages.

MR. DICKINSON: Will you produce that, please; send for it?

MR. REED: I will have it here after lunch, unless you want to adjourn while I go down stairs and get it now.

MR. DICKINSON: Oh, no; after lunch will do.

By MR. REED:

Q. Where do you get the detail tonnages that go to make up the totals shown in this Minnesota Tax Commission report, Mr. Sebenius?

A. Well, the mining companies, under the laws of Minnesota, are requested and obliged to report upon request from the State Tax Commission of Minnesota, tonnages contained in the various properties in detail, together with stock pile, shipments and developments.

Q. Did your company make such a report?

A. Our company made such a report.

Q. Did the Tax Commission correct that report in any way?

A. It did.

Q. After correction, state whether or not it was adopted as the assessment of the Tax Commission.

A. It was adopted by the Tax Commission.

Q. Have you compared these figures for 1912 reserves with that corrected report?

A. I have.

Q. Have you done that personally?

A. I have.

Q. On how many occasions?

A. At least on two occasions.

Q. When did you do it last?

A. Last night.

Q. Did you check it in detail?

A. I did.

Q. And of your own personal knowledge, do you know this to be a correct statement?

A. I do.

Q. From what source do you get the figures as to shipments that are shown in this exhibit, Mr. Sebenius?

A. The shipments are our own figures from our own files; from the audit department of the Mining Company.

Q. They are your own company's figures of shipments, are they?

A. Yes, sir.

Q. Do they check substantially with the Iron Trade Review figures of shipments?

A. Yes, sure.

Q. How do you get the reserves as of 1901, as they appear in this exhibit?

A. By adding the shipments up to 1911 to the reserves January 1, 1912.

MR. DICKINSON: Will you read that answer?

(The answer was read by the stenographer.)

By MR. REED:

Q. Now, Mr. Sebenius, I call your attention to Exhibit No.——

A. (Interposing) That is including 1911.

Q. (Continuing) I call your attention to Exhibit No. 101, entitled "List of Mesabi Range properties containing ore submitted to various companies subsidiary to the United States Steel Corporation, but not acquired by said Corporation or any of its subsidiaries." In whose department was that prepared?

A. It was prepared in my department.

Q. At whose request?

A. At the request of the president.

Q. Mr. Olcott?

A. Mr. Olcott.

Q. As mining engineer of the Oliver Iron Mining Company, have you had knowledge of the various properties submitted to the company?

A. I have.

Q. Have you yourself reported on such properties from time to time?

A. I have in most all instances.

Q. In most all instances?

A. Yes, sir.

Q. Have you examined this exhibit which is now before you?

A. I have.

Q. Do you know it to be correct?

A. I do; to the best of my belief and experience it is correct.

Q. What is the reason for your belief? Have you personal recollection of many of those transactions?

A. I recollect most of these properties; I have seen some of the papers in connection with some.

Q. Have you examined and reported on some?

A. Almost all of them.

Q. Of course I understand, Mr. Sebenius, that you cannot remember all of these details of description.

A. Nobody can.

Q. But have you sufficient recollection of those transactions so that, after refreshing your recollection by this memorandum, you can vouch for their substantial accuracy?

A. Yes, sir.

Q. I call your attention, now, to exhibit No. 103, statement showing tonnages shipped by the Steel Corporation and other operators, and showing also other figures, and ask you in whose department that was prepared?

A. That was prepared in my department.

Q. At whose request?

A. At the request of the president.

Q. Under whose direction was it prepared?

A. Under my direction.

Q. What is the source of the information shown on this exhibit as to the total tonnage shipped?

A. The figures of the Iron Trade Review.

Q. What is the source of the information shown on that statement as to the Steel Corporation's shipments?

A. The same; Iron Trade Review reports.

Q. What is the source of the information as to other properties shown?

A. The Iron Trade Review.

Q. Have you checked those figures with the Iron Trade Review figures?

A. I have.

Q. Do you know them to be correct?

A. I do.

Q. What is the source of the information as to the ore reserves of the Steel Corporation, January 1, 1912?

A. The same source as I have mentioned, the tonnages accepted and adopted by the Tax Commission of the State of Minnesota, and the tonnages given in Mr. Finlay's report to the Michigan Tax Commission, together with the Wisconsin Tax Commision figures.

Q. I suppose the same as to the ore reserves of other operators?

A. The same.

Q. I show you Exhibit No. 104, statement showing tonnages of merchantable ore January 1, 1912, and ask you at whose direction this exhibit was prepared?

A. At the direction of the president of the Oliver Iron Mining Company, Mr. Olcott.

Q. In whose department was it prepared?

A. In my department.

Q. Under whose direction?

A. Under my direction.

Q. What is the source of the information contained in that statement as to the reserves of the Steel Corporation and other operators on the Minnesota ranges?

A. The source of the information is the figures adopted by the Minnesota State Tax Commission.

Q. And as to the Michigan ranges?

A. The Michigan ranges are the tonnages given in Finlay's report.

Q. Of 1911?

A. Of 1911.

Q. And as to the Wisconsin range?

A. The tonnages I know to be those accepted by the Wisconsin Tax Commission on the Wisconsin properties.

Q. That is, the 3,400,000 tons you spoke of?

A. Yes.

Q. In making up these statements of the Mesabi range reserve, what tonnages did you include for the Steel Corporation in the Hill ores; on what principle did you separate

Steel Corporation tonnage from independent tonnage in the Hill properties?

A. The great majority of the Hill properties have already been surrendered. That tonnage is reported by the Great Northern people to the Minnesota State Tax Commission. We retained some operating properties, the tonnage——

Q. You mean you retained during the balance of the lease which will expire on January 1, 1915?

A. Yes, sir.

Q. Is that what you mean?

A. Yes, sir. We retained up to January 1, 1915, a certain number of properties, operating properties, under the Hill lease.

Q. That was for the purpose of working out your minimums, was it?

A. Yes, sir; for the purpose of working out the minimums. There will be left in those properties a certain tonnage when they are surrendered finally, January 1, 1915, which will be independent's ore and is now independent's ore, as we cannot mine it. That tonnage is accounted for with the independent's tonnage. Does that explain it?

Q. And you have charged the Steel Corporation with the minimums which you will take out if you are successful?

A. We will take them out.

Q. Which you will take out during the balance——

A. Just during 1912, 1913, and 1914 shipping seasons.

Mr. Dickinson: Would you mind giving the amount, while you are on that?

By Mr. Reed:

Q. What is the amount of that tonnage?

A. About 18,000,000 tons. I guess I can give it to you closer than that.

Q. You had better give us the exact amount.

A. 18,977,777 tons.

Q. What is that figure? What does it mean?

A. It is the Great Northern ore in excess of the minimum requirements.

Q. Is that figure that you have just given us the amount

of the minimums remaining to be mined from these returned properties under the Hill lease?

A. No.

Q. Prior to 1915?

A. No.

Q. That is what I tried to ask you for and what Judge Dickinson asked you for.

A. I beg your pardon.

Q. What does this figure of eighteen millions represent—the excess tonnage which you will not mine in these retained properties?

A. That is what it does.

Q. What is the amount of the minimums which you will mine from these properties up to January 1, 1915?

A. 11,250,000.

Q. That is the amount of minimums which have been and will be mined between January 1, 1912, and January 1, 1915?

A. That is it.

Q. That is correct?

A. Yes, sir; that is right.

Q. How much of that tonnage——

A. I beg to ask now: Is that thing fully understood?

Q. It is more likely to be if you will wait until I finish my question, Mr. Sebenius.

How much of that tonnage was mined out during the year 1912?

A. There was none of that tonnage in 1912.

Q. Then in stating that this 11,000,000 tons included the minimums to be mined out between January 1, 1912, and January 1, 1915, you misunderstood my question?

A. I did.

Q. Then I will ask it again, Mr. Sebenius.

How much of the Hill tonnage is minimums to be mined out between January 1, 1912, the date as of which that statement speaks, and January 1, 1915?

MR. SEVERANCE: That is what you want, is it not, Judge?

MR. DICKINSON: Yes.

THE WITNESS: I think that is 12,000,000 tons.

By Mr. Reed:

Q. How much of that is the minimum for 1912?

A. I canot tell the tonnage of 1912, what has been mined, in 1912.

Q. All right, let us ask you this way: How much of the Hill tonnage have you charged against the Steel Corporation in these statements?

Mr. Dickinson: You mean this Exhibit 104?

Mr. Reed: 104 and the other statements.

Mr. Colton: 102 also.

Mr. Reed: The other statements that include the Mesabi reserves.

(Whereupon a recess was taken until two o'clock p. m.)

AFTER RECESS.

JOHN U. SEBENIUS,

the witness under examination at the taking of recess, resumed the stand.

DIRECT EXAMINATION (Continued)

By Mr. Reed:

Q. When we adjourned at lunch time we were somewhat confused in regard to the quantity of Hill tonnages that had been included in these various statements as ores of the Steel Corporation, and I want to start at the beginning of that subject now and see if we can straighten it out a little. To begin with, we understand that some of the Hill properties have been retained to be worked until January 1, 1915, and some have been surrendered to the Hill trustees. That surrender, I think you testified, took place in March, 1912. Now, if I correctly understood you this morning, all of the tonnages in those properties which were surrendered to the Hill trustees

in March, 1912, are counted as outside or independent tonnages in these statements?

MR. DICKINSON: Just a moment before he answers that. The term has been used "surrender of the Hill leases." We object to any statement or conclusion as to that surrender or what it is, as it is in writing, and this would be secondary evidence. The writings themselves are the best evidence.

THE WITNESS: Yes.

By MR. REED:

Q. Now, then, the Steel Corporation has retained possession of certain of the Hill properties; is that correct?

A. That is correct.

Q. And if I correctly understood your testimony this morning, you have included part of the tonnage in these retained properties as Steel Corporation ores, and you have put in part as the ores of other operators?

A. Yes, that is correct.

Q. Now, Mr. Sebenius, in dividing these tonnages on the retained lands between the Corporation and the other operators, what basis of division did you use?

A. The estimated tonnage to be shipped and mined by the Oliver Iron Mining Company.

Q. Shipped and mined up to what time?

A. To January 1, 1915.

Q. How was that tonnage that will be shipped up to January 1, 1915, estimated?

A. Estimated according to the requirements of the minimum prepaid tonnage.

Q. In other words, that you will ship just the minimums up to January 1, 1915?

A. Yes.

Q. Is that what will be shipped from those properties?

A. Substantially.

MR. DICKINSON: Have you asked for the amount, or will you ask that?

MR. REED: I am going to get that presently, Judge.

By MR. REED:

Q. Then the balance of the tonnage in the retained Hill

properties, over and above these minimums, is credited to the outside operators?

A. That is right.

Q. Now, Mr. Sebenius, what is the tonnage of those minimums up to January 1, 1915? In other words, what tonnage on the Hill lands have you charged to the Corporation?

A. 18,897,674 tons.

A. What is the tonnage on these same lands in excess of the minimums which you say you charged to the outside operators?

A. 18,977,777 tons.

Q. And the sum of those two figures is the total tonnage of these retained lands, is it?

A. Yes, on which we paid taxes.

Q. Is there anything that needs explanation in regard to the tonnages and the shipments of the Biwabik mine, and if so, what?

MR. DICKINSON: Do you mean anything appearing on these exhibits?

MR. REED: Yes.

THE WITNESS: The Steel Corporation owns 25 per cent. of the Biwabik mine.

By MR. REED:

Q. Then in the statement of ore reserves have you charged the Steel Corporation with any part of the ores that are assessed in the Biwabik?

A. Their proportion.

Q. Which is one-fourth?

A. One-quarter.

Q. And in the shipments from the Biwabik mine have you charged the Steel Corporation with one-quarter of the shipments?

A. I have.

Q. In the Mahoning mine what have you done with the ore reserves there?

A. Treated them the same as in the case of the Biwabik.

Q. The Steel Corporation owns one-fifth of the Mahoning?

A. It does.

Q. And have you charged it with one-fifth of the Mahoning tonnage?

A. Yes.

Q. In all these statements?

A. I have.

Q. And the other four-fifths to the independents?

A. Independents.

Q. Now, in the shipments from the Mahoning, have you divided them in the same way?

A. I have.

Q. Charging one-fifth of the shipments as Steel Corporation shipments?

A. Yes, sir.

Q. How about the Union mines?

A. In the Union mines the Corporation owns one-half interest.

Q. Have you charged it with one-half of the reserve tonnages?

A. I have.

Q. And one-half of the shipments?

A. Yes.

Q. How about the Pewabic mine?

A. The same way. The Corporation owns a one-half interest, and we have credited them with one-half and the independents one-half.

Q. Of both shipments and reserve tonnages?

A. Yes, sir.

Q. Now, you did not get your Cuyuna tonnage that is stated on Exhibit No. 104 from the Tax Commission's books, I presume?

A. There was nothing said about the Cuyuna range in the tax books.

Q. Where did you get the figure of 417,000,000 tons?

A. From the testimony given here these last few days.

Q. That is the source of your information as to that?

A. Yes.

MR. DICKINSON: We except to that as incompetent and hearsay.

MR. REED: Cross examine, Judge.

CROSS EXAMINATION.

By Mr. Colton:

Q. Mr. Sebenius, you say there is nothing said in the tax commission report about the Cuyuna range. Do you mean there is nothing said in its entire report about the Cuyuna range?

A. As to tonnage—as to exact tonnages.

Q. Now, Mr. Sebenius, taking Defendants' Exhibit No. 104, if you have a copy of it before you, you may look at it.

A. I do not believe I have. What is 104? What is the title of it?

Q. It is entitled "statement showing tonnage of merchantable iron ore for the Lake Superior district by ranges. January 1, 1912."

A. Yes; statement showing tonnage of merchantable ore from the Lake Superior district by ranges from January 1, 1912; that is it.

Q. Now, how much Hill ore is included in the total of 1,397,442,806?

A. About 235,000,000 tons.

Q. Was that all in the possession of the United States Steel Corporation on January 1, 1912?

A. No.

Q. What part of it was not in the possession of the United States Steel Corporation on January 1, 1912?

A. All of it was not in the possession of the United States Steel Corporation; none of it was.

Q. None of that 235,000,000 tons was in the possession of the United States Steel Corporation?

A. No.

Q. Was it under the control of the Steel Corporation?

A. No, sir.

Q. Was it not held under the Hill lease at that time?

A. No.

Q. None of that 235,000,000 tons was held under the Hill lease on January 1, 1912?

A. No, sir.

Q. Have you seen any papers surrendering any of the Hill lands?

A. I have been informed that they have been surrendered.

Q. And you are basing your statement that none of this ore was controlled by the Steel Corporation upon the understanding that some one gave you that the Hill lands had been surrendered?

A. I have been so advised by the legal department, that they have been surrendered.

Q. When were they surrendered?

MR. REED: Mr. Sebenius tells me that 235,000,000 tons includes all the Hill tonnage, including those properties that we are still working, and those that have been surrendered in March, 1912.

THE WITNESS: With the exception of the ore that we shall ship.

MR. REED: Yes, of course.

By MR. COLTON:

Q. Mr. Sebenius, prior to March, 1912, had you surrendered any of this 235,000,000 tons?

MR. REED: You understand, Mr. Sebenius, Mr. Colton does not ask about the notice of surrender. He asks whether you had actually given up the possession.

THE WITNESSS We had.

By MR. COLTON:

Q. Now, do you understand the question?

A. Please ask it again.

MR. COLTON: Will you read the question?

(The question was read by the stenographer.)

THE WITNESS: We had.

By MR. COLTON:

Q. Had you surrendered any portion of this 235,000,000 tons of the Hill lease ore land?

A. Read the question, please.

(The question was read by the stenographer.)

THE WITNESS: We had.

MR. SEVERANCE: I do not think Mr. Sebenius understands the question.

MR. DICKINSON: Read the question again.

MR. SEVERANCE: It is plain enough on its face, but I think he confuses the two things, the notice and the actual surrender.

MR. COLTON: I am not speaking of any notice of surrender. I am speaking of giving up the property containing this 235,000,000 tons.

By MR. COLTON:

Q. Had any of that property been given up as early as January 1, 1912?

A. Yes.

Q. Now, how many millions had been given up before January 1, 1912?

MR. DICKINSON: Read the question.

(Question read by the stenographer.)

MR. SEVERANCE. I think that question is somewhat ambiguous. "Given up" might mean serving the notice to surrender.

MR. COLTON: All right.

MR. SEVERANCE: You mean the possession—the surrendering of the possession, do you not, by your question?

MR. COLTON: I explained that once, Mr. Severance, but I will undertake to do it again.

MR. SEVERANCE: I do not think he understood you. By "possession" you mean how many million tons we had actually surrendered the possession of to the great Northern?

MR. COLTON: That is it exactly.

MR. SEVERANCE: At that time?

MR. COLTON: As early as January 1, 1912.

THE WITNESS: May I consult my attorney a minute?

MR. DICKINSON: No; answer the question:

THE WITNESS: What is the question?

(The pending question and the succeeding colloquy were thereupon read aloud by the stenographer.)

MR. REED: You understand, Mr. Sebenius, that what Mr. Colton has asked you for is whether any of the Hill lands had been actually surrendered possession of in January, 1912. He does not ask you about the giving of any notice of sur-

render, but he is asking you whether any had been actually turned over; whether the lands had been turned over to the Hill trustees in January, 1912?

A. I think not.

MR. COLTON: I ask to have the entire question and answer read, and all that went with it.

(The stenographer read the following:)

"Q. Now, how many millions had been given up before January 1, 1912?

"MR. DICKINSON: Read the question.

"(Question read by the stenographer.)

"MR. SEVERANCE: I think that question is somewhat ambiguous. 'Given up' might mean serving the notice to surrender.

"MR. COLTON: All right.

"MR. SEVERANCE: You mean the possession—the surrendering of the possession, do you not, by your question?

"MR. COLTON: I explained that once, Mr. Severance, but I will undertake to do it again.

"MR. SEVERANCE: I do not think he understood you. By 'possession' you mean how many million tons we had actually surrendered the possession of to the Great Northern?

"MR. COLTON: That is it exactly.

"MR. SEVERANCE: At that time?

"MR. COLTON: As early as January 1, 1912.

"THE WITNESS: May I consult my attorney a minute?

"MR. DICKINSON: No; answer the question.

"(The pending question and the succeeding colloquy were thereupon read aloud by the stenographer.)"

MR. SEVERANCE: You already have in the record the arrangement and subsequent contract.

MR. COLTON: No, we have not.

MR. SEVERANCE: Yes, you have.

MR. REED: Has not that subsequent contract been proved yet?

MR. COLTON: No, it has not. It is not in evidence.

MR. SEVERANCE: It was given to you. You examined it carefully.

MR. COLTON: We have never put in evidence anything subsequent to October 26, 1911. That was our general principle in taking the proof.

MR. REED: It seems to me that where the facts are capable of exact proof by the documents it is hardly fair to Mr. Sebenius to examine him as to them.

MR. SEVERANCE: I thought you put this in. You took the papers and examined them. I gave them to you myself. I thought you had put them in evidence.

MR. COLTON: I have examined them. I have examined certain files.

MR. SEVERANCE: You examined the whole of this. I gave it to you.

(By request the stenographer repeated the last question and answer as follows:)

"MR. REED: You understand, Mr. Sebenius, that what Mr. Colton has asked you for is whether any of the Hill lands had been actually surrendered possession of in January, 1912. He does not ask you about the giving of any notice of surrender, but he is asking you whether any had been actually turned over; whether the lands had been turned over to the Hill trustees in January, 1912?

"THE WITNESS: I think not."

By MR. COLTON:

Q. That is, you think none of this tonnage had been actually turned over to the Hill trustees prior to January 1, 1912?

A. It had not been turned over.

Q. Prior to January 1, 1912?

A. No, sir.

Q. Then on January 1, 1912, the United States Steel Corporation had under its control this 235,000,000 tons which is included in the total of 1,397,442,806?

MR. SEVERANCE: I want to object to that as asking for a legal conclusion. The evidence already shows that previous to that time a notice of cancellation had been given, as pro-

vided by the Hill lease, and it is not for this witness to state what the effect of that was, as to whether that left the Steel Corporation in control of the property.

(By request, the stenographer repeated the pending question.)

THE WITNESS: It did.

By MR. COLTON:

Q. Then how much tonnage did the United States Steel Corporation have under its control as of January 1, 1912? You may look at the exhibit to aid you in making that calculation.

A. You mean on the Mesabi, or as a total?

Q. On the Mesabi range.

A. It had 860,312,061 tons, plus the Hill ore.

Q. Plus the Hill ore?

A. Yes.

Q. How much was the Hill ore?

A. 235,000,000.

Q. Now, Mr. Sebenius, should you not subtract from that 235,000,000, 18,897,674 before adding it to 860,312,061, in order to find out the Corporation's tonnage as of January 1, 1912? I will give the reason for that: Because you have already included under the Corporation's holdings, as I understood your direct testimony, eighteen million and some odd tons of ore, which is included in the Hill lease?

A. Yes.

Q. You should subtract it?

A. Yes.

Q. Would you be good enough to subtract that 18,897,674—if that is the correct amount—from 235,000,000?

A. I have made the calculation.

Q. What is the result?

A. 216,102,326.

Q. Now, would you be good enough to add that to the 860,312,061?

MR. REED: What are you testing, Mr. Colton; the proficiency of Mr. Sebenius in arithmetic?

THE WITNESS: I have added it.

By MR. COLTON:

Q. What is the result?

A. 1,076,414,387 tons.

Q. Now, Mr. Sebenius, that is the amount of ore that the United States Steel Corporation had in its possession before it gave up the possession of any of the Hill ores concerning which you have just testified; is that correct?

A. Yes.

Q. And in order to find out the percentage of the United States Steel Corporation's holding on the Mesabi range as of that date, we would compare 1,076,000,000 and some odd, with 1,397,000,000, would we not?

A. Yes.

Q. Referring to the 417,000,000 for the Cuyuna range, I understand that you have already testified that that was taken from other testimony in this case, and not based on any information of yours?

A. Yes.

MR. COLTON: We object to that part of the table as hearsay.

MR. REED: Mr. Sebenius has already stated that the whole table is hearsay, merely his compilation from information derived from other sources.

MR. COLTON: I object to that also on the further ground that it is not a compilation.

By MR. COLTON:

Q. Where did you get the 11,416,500 which is given under the heading, "Steel Corporation," and opposite "Menominee Range"?

A. From the Finlay report.

Q. Does that tonnage appear summarized in the Finlay report anywhere?

A. No; it does not.

Q. Did you take the detailed figures and add them up?

A. Yes.

Q. How did you find them? Under "Mines"?

A. Yes; the tonnages are listed.

Q. How are they listed?

A. They are listed in tables.

Q. Under the name of property?

A. For the various properties the names are given; the names of the mines are given.

Q. The names of the Corporation's mines are given?

A. No; the names of the mines are given in the list, and then we picked out those that belong to the independents and those that belong to the Corporation.

Q. And you picked out the United States Steel Corporation mines yourself, did you?

A. Well, it was done in my department.

Q. You did not do it yourself?

A. I checked it over afterward.

Q. You looked at the mines and saw that it included all of your mines?

A. I looked it over; yes.

Q. Do you know whether it included all your mines or not?

A. I am pretty sure it did.

Q. You are not certain?

A. Surely. We checked it over.

Q. Well, what do you mean by being pretty sure?

A. Just as sure as a person can be.

Q. Just as sure as you can be. Did you add up the figures?

A. I did not, but I saw the summary.

Q. You saw the summary?

A. Yes.

Q. But the summary does not give the Steel Corporation tonnage, does it?

A. No, but the names of the mines are given, and you can pick out those mines belonging to the Corporation.

Q. But if you did not add them up, how do you know that the result is correct?

A. I may have added them; I satisfied myself that the thing was correct.

Q. Did you add them?

A. Perhaps I did.

Q. Perhaps you did?

A. We always add and check these statements, Mr. Colton.

Q. Checking is one thing and adding is another thing. Did you actually take the different mines and put down for each mine the tonnage and then add and check up?

A. I said that those tonnages were picked out in my department and added together correctly, and I went over those figures.

Q. Did you go over and verify the addition?

A. I don't remember.

Q. Don't you remember whether you verified the addition or not?

A. No.

MR. COLTON: Then I object to the summary on the ground that the witness is incompetent to testify concerning it. He has not shown that it was added up by him himself.

By MR. COLTON:

Q. As to the other totals which appear under the heading of the Steel Corporation, is your testimony in regard to them the same as your testimony in respect to this 11,416,500?

A. Substantially so; yes.

MR. COLTON: I object on the same ground to the other summaries given under the Steel Corporation, from the Mahoning range down to and including the Gogebic range, as not having been checked over by this witness, or rather not having been added up by him and the summary verified by him.

By MR. COLTON:

Q. Where did you get the Vermillion range from, 11,420,158, under the Steel Corporation?

A. From the figures of the Minnesota Tax Commission.

Q. Did you find that figure of 11,420,158 in any report of the Minnesota Tax Commission?

A. Yes.

Q. In what book and on what page of the Minnesota Tax Commission reports does it appear?

A. It is not printed in the report.

Q. Where is it printed?

A. It is in a typewritten statement that is in the possession of the Minnesota Tax Commission.

Q. Did you go to the Minnesota Tax Commission office?

A. I did.

Q. Did you look at this typewritten report?

A. I did.

Q. Did you take this particular number from that?

A. I did.

Q. The exact figure of 11,420,158?

A. I did.

Q. This is the aggregate that you found under the heading of the United States Steel Corporation in the Minnesota Tax Commission offices?

A. At their offices in St. Paul.

MR. COLTON: We object to this summary as based on an unpublished report, and to the testimony of this witness as secondary in regard to it, to the exhibit as secondary and to both the testimony and the exhibit as secondary, the original documents not being produced and proved.

By MR. COLTON:

Q. Now, as to the tonnage on the Mesabi range, where did you get that 860,312,061 from?

A. That is taken from the figures of the Minnesota Tax Commission.

Q. A typewritten statement?

A. Yes.

Q. You did not find segregated the Steel Corporation's tonnages, 860,312,061 anywhere in the Minnesota Tax Commission documents, did you?

A. Yes.

Q. Will you describe that document and the title of that document, the particular document in which you found that 860,312,061?

A. I cannot describe the document; I have seen the document.

Q. Where did you see that document?

A. I saw that in the State Capitol, St. Paul.

Q. When did you see it?

A. In the fall of 1912.

Q. In whose possession was it then?

A. The Minnesota Tax Commission.

Q. Has it since been published?

A. No, sir.

Q. Do you know whether it is going to be published?

A. I do not believe it will be.

Q. Are you positive that this appeared as a total, this 860,312,061?

A. I cannot say that the total was exactly the same.

Q. Then you are not sure that this total of 860,312,061 appears anywhere in the Minnesota Tax Commission's report, are you?

A. I am not sure that the total appears, but adding the tonnages that are presented to the Minnesota Tax Commission you get the tonnage.

Q. Mr. Sebenius, you have testified to there having been in the United States Steel Corporation properties as of January 1, 1912, one billion, seventy-six million and some odd thousand tons of ore on the Mesabi range. Now, is that the total that you found upon adding up the different figures in the Minnesota Tax Commission's report?

A. No, sir.

Q. Where did you get that 860,312,061 from, then?

A. I got that from the records of the Minnesota Tax Commission.

Q. How did you get it?

A. I went down there and got them.

Q. You went down and got them?

A. Yes.

Q. And you took them to your office?

A. Yes, a copy of them.

Q. You got a copy of them, and you took that copy to your office?

A. Yes.

Q. Is that copy in your possession now?

A. Yes, sir.

Q. Is that a copy? (referring to paper in witness' hand)

A. No, sir.

Q. You took a copy; you found separate mines there, did you?

A. Yes.

Q. And separate properties?

A. Yes.

Q. You didn't find any totals, did you?

A. No.

Q. You found no totals?

A. No.

Q. Then how did you arrive at this particular total of 860,312,061?

A. By adding up these totals in the Minnesota Tax Commission's report, by adding up in the Minnesota Tax Commission's report such tonnage as belonged to the Oliver Mining Company and to the Steel Corporation.

Q. A report, and to whom?

A. The Minnesota Tax Commission.

Q. The Minnesota Tax Commission's report, I understood you just now to say; you got that from a typewritten statement showing individual mines, and you took that to your office?

A. No, I didn't take it to the office.

Q. You took the figures?

A. Yes.

Q. And that report or summary or statement was not to be published?

A. Not that I know of, to be published.

Q. When you saw a report, don't you really mean, Mr. Sebenius, that you got a statement showing a number of different mines on the Mesabi range from the Minnesota Tax Commission's office; is that correct?

A. No; I got a statement or a list showing tonnages that were held by the Steel Corporation, tonnages.

Q. Who gave you that list?

A. A Tax Commissioner.

Q. What member of the Tax Commission?

A. The Secretary of the Commission.

Q. Mr. Hurd?

A. Yes.

Q. Did you see the original record from which that was made?

A. Yes.

Q. You saw the original report?

A. Yes.

Q. Did you compare this copy with the original?

A. I did.

Q. You compared each item with the original record; now, where is the original record?

A. In St. Paul.

Q. Is it in a book?

A. No.

Q. What is the name of the book, if you know?

MR. REED: He said it was not in a book.

By MR. COLTON:

Q. Then I misunderstood you. What is it?

A. A statement.

Q. What sort of a statement?

A. Typewritten. Well, I think, if I remember right, it is a typewritten statement.

Q. A typewritten statement?

A. Yes.

Q. Is it made to anybody?

A. I do not recall that.

Q. Is it a signed statement?

A. No; I do not think it is. I do not recall that.

Q. Did you compare your copy with that statement in the Minnesota Tax Commission's office?

A. Yes, sir.

Q. And did you compare that statement with anything else?

A. No.

Q. You never saw the records from which this typewritten statement, of which you got a copy, was made, did you?

A. Yes.

Q. You saw the records?

A. Yes.

Q. From which that was made?

A. Yes.

Q. Did you compare the statement of which you got a copy with those records?

A. I did.

Q. Now, what were those records that you compared it with?

A. It is a typewritten statement.

MR. DICKINSON: What was the answer?

THE WITNESS: It is a typewritten statement.

MR. COLTON: It is a typewritten statement.

MR. DICKINSON: Made by whom?

By MR. COLTON:

Q. The same typewritten statement of which you got a copy?

A. Yes, sir.

Q. Then you compared the original record with your typewritten statement?

A. Yes, sir.

Q. And you compared the typewritten statement with the original record; is that it?

A. Yes, sir.

Q. But you did not compare the original record, of which you took a copy, with any other records, did you?

A. No.

Q. As I understand it, this tonnage of 860,312,061 tons did not appear as a total in either the original or the copy?

A. No, I do not think so.

Q. Now, is it not true, as a matter of fact, that at that time the Oliver Iron Mining Company or the other subsidiaries of the United States Steel Corporation were reporting not only the tonnage included within this 860,000,000, but also the tonnage of the Hill ore lands; is that a fact?

A. Will you let me have the question, please?

(Question read by the stenographer.)

THE WITNESS: Read that again. I do not get that clear.

MR. REED: What do you mean by "that time," Mr. Colton?

MR. COLTON: On January 1, 1912, and prior to that time.

MR. REED: Well, there is no evidence that there were any reports made on January 1, 1912.

THE WITNESS: This report that I have reference to was not in evidence as of January 1, 1912.

By MR. COLTON:

Q. What was the date of that report?

A. That report was of May 1, 1912.

Q. This report was of May——

A. (Interposing.) First, 1912.

Q. And from that report of May 1, 1912, you calculated back to January 1st, 1912? How did you do that?

MR. REED: Is there ever any mining done between those dates?

THE WITNESS: I beg your pardon?

MR. COLTON: I object to your suggesting to the witness what his answer shall be.

THE WITNESS: Read the question, please.

(The pending question was read by the stenographer.)

THE WITNESS: Well, because the tonnages of January 1, 1912, would be about the same.

By MR. COLTON:

Q. Now, as of what date does this report of May 1, 1912, give tonnages in the various properties that you have examined?

A. As of that date.

Q. As of May 1, 1912?

A. Yes, sir.

Q. Then the report that you examined gave tonnages as of the date of May 1, 1912?

A. Yes.

Q. And not as of the date of January 1, 1912; is that correct?

A. That is correct.

Q. And you assumed that the tonnages on January 1, 1912, were the same as they were on May 1, 1912; is that correct?

A. Yes, sir.

Q. Now, Mr. Sebenius, you spoke of the commission having made a correction in the tonnage reported by the United States Steel Corporation to the commission. What was the nature of that correction?

A. They increased our tonnage.

Q. How much did they increase the tonnage reported by you?

A. About two million tons.

Q. About two million tons?

A. Yes.

Q. As of what date did you make your report to the Minnesota Tax Commission?

A. As of May 1, 1912.

Q. Did you make a report on May 1, 1912?

A. Yes, sir, as of May 1, 1912.

Q. Well, when was that report prepared?

A. Prepared it between January 1 and May 1, 1912; sometime in the spring of 1912.

Q. When was it filed with the commission?

A. I cannot give you the date. It was filed some date later.

Q. It was filed before the 1st of May, was it not, 1912?

A. I could not say as to that.

Q. What?

A. I could not remember as to that. We are obliged to make a report to the State as required by law, about that time.

Q. At what time are you required by law to make that statement?

A. What?

Q. At what time are you required by law to make that statement, if you know?

A. I do not remember just exactly the date. It is in the spring of the year.

Q. Has it got to be done before May 1st?

A. Yes, sir.

Q. And it was done some time before that, was it not, or otherwise you could not have gotten those individual tonnages, could you?

A. I do not know that I testified that I got those tonnages on May 1st, 1912.

Q. When did you get them?

A. During the year 1912. I got it after the Tax Commission had gone over it, the statements, and verified them.

Q. Yes; and when did you get them?

A. The final figures were gotten in September; in the fall of 1912.

Q. Is that the time you got the statement that you received directly from Secretary Hurd of the Commission?

A. That is it; that is the time.

MR. COLTON: I object to the witness' testimony as to this exhibit, on the ground that the Minnesota Tax Commission's summary of tonnage is not produced and not put in evidence.

By MR. COLTON:

Q. Now, Mr. Sebenius, referring to Defendants' Exhibit No. 103, statement showing (a) tonnages shipped from the Lake Superior district for the years 1907 to 1911, inclusive, by United States Steel Corporation and other interests; (b) average yearly shipments, 1907 to 1911, inclusive; (c) ore reserves as of January 1, 1912; (d) period of years which such reserves will last on above basis of shipments. What does that 124,224,681 represent, that is given under the column "Mesabi" and opposite the statement "Total tonnage shipped years 1907 to 1911, inclusive?" What does that represent?

A. The total tonnage shipped from the Mesabi range.

Q. Does that represent the total tonnage shipped from the Mesabi range?

A. Yes, sir.

Q. Where did you get that total from?

A. From the Iron Trade Review reports.

Q. From the weekly copies of that paper?

A. No; they have been each year giving statements as to tonnage shipped from the Lake Superior district.

MR. REED: It is the same thing Judge Dickinson put in evidence yesterday?

By MR. COLTON:

Q. I was just going to ask if it was not the same thing—the statement from 1909 and previous years we put in evidence the other day. Have you seen a statement similar to that?

A. Yes; I believe so; that is, I do not know whether that is the statement. I made this from the regular statement issued by the Iron Trade Review.

Q. This statement was issued from time to time?

A. From year to year.

Q. And the statements of the tonnages given as shipped are considered to be accurate by the steel industry, generally?

A. Yes; they are so taken.

Q. Referring to the total tonnage shipped by the United States Steel Corporation, 1907 to 1911, do you know whether that tonnage represents any shipments made by the United States Steel Corporation for use by other parties than itself?

A. I do not.

Q. You do not know?

MR. REED: Will you not please explain, Mr. Colton, whether you mean shipped from Lake Superior for use at lower Lake ports?

MR. COLTON: By other parties than the United States Steel Corporation.

MR. REED: I thought it had been very clearly proved that there were no such shipments.

MR. COLTON: I am now conducting the cross-examination, and I do not think you should suggest to the witness what his answer should be.

THE WITNESS: I do not know from my own knowledge, whether the Steel Corporation ships any ore for other parties.

By MR. COLTON:

Q. You do not know, yourself, about that?

A. It is well recognized and known, in a general way, that the Steel Corporation uses its own ores.

Q. You are just basing that, then, on sort of a general rumor or knowledge, to the effect that the United States Steel Corporation uses its own ore?

A. No; not exactly, because we go through statements right in my office, where ore from the Steel Corporation is being shipped.

Q. Yes, they come from time to time, but they do not come enough so that you could check up this figure, 77,500,419, do they?

A. Well, I could not say for absolute certainty, but it is known.

Q. It is known?

A. It is known, yes.

Q. It is not known to you personally, is it?

A. No, not absolutely.

Q. Do you mean to modify your previous statement that it was known to you as a matter of general knowledge?

A. Yes, sir.

Q. As I understand your testimony, you intend to testify now—and correct me if I am wrong in my understanding—that this entire 77,500,419 is used by the United States Steel Corporation itself?

A. So far as I know.

Q. But do you know anything about it?

A. As much as anybody does, outside of the officers of the Corporation, and the managers and presidents of the various companies mining it.

Q. Some of those know more about it than you do, do they not?

A. Surely they do.

MR. COLTON: I object to this witness' testimony on the subject as hearsay.

MR. REED: This witness not having testified—

MR. COLTON: I object, especially, to this figure, 77,500,419.

By MR. COLTON:

Q. Do you know anything about the average yearly shipments by the United States Steel Corporation, of your own knowledge?

A. I know it from our records.

Q. Did you get from your own records this figure, 15,500,084?

A. From our records and from the Iron Trade Review figures.

Q. Did you get that figure yourself?

A. At the time when the summary was compiled, and verified that shown by the Iron Trade Review by our own shipments.

Q. Well, now, did the Iron Trade Review show anything of your average yearly shipments?

A. They showed the mines from which those ores were being shipped, and added them together.

Q. You took those from the Iron Trade Review?

A. Yes.

Q. You did not take them from your records?

A. Not entirely.

Q. Did you take it from your records at all?

A. I compared this Iron Trade Review statement from our own records.

Q. Did you make the additions?

MR. REED: You get the average by division.

MR. COLTON: I suppose you have to do some adding before you do any dividing.

THE WITNESS: I do not know that I did the compilation exactly, because it was turned over to my subordinates to work out these statements, as in previous statements.

By MR. COLTON:

Q. And you relied upon this as correct?

A. I went over these statements.

Q. But you did not add up the totals?

A. Perhaps not, but I checked the statement.

MR. COLTON: I object to this witness testifying with regard to this Exhibit No. 103 on the ground that he is not competent to testify to said exhibit, in so far as it applies to the statement, A, showing tonnages shipped from the Lake Superior district from the years 1907 to 1911 inclusive by the United States Steel Corporation and by other interests; and B, average yearly shipments from 1907 to 1911, inclusive.

By Mr. Colton:

Q. Now, as to the third statement appearing in this exhibit, ore reserves as of January 1st, 1912, under the Mesabi range we find in this exhibit 860,312,061. Now, at that time the United States Steel Corporation had in its control, as you have just testified, 1,076,000,000, did it not?

Mr. Reed: I object to the conclusion of the witness being asked as to the legal effect of the notice of surrender of the Hill lease.

The Witness: 1,076,000,000.

Mr. Reed: Mr. Colton, may I ask whether you dispute the correctness of the addition of these figures? I am reminded of the great number of statements that we have permitted to go in evidence on your case, subject to any correction if any errors were found.

Mr. Colton: In every case I think we asked permission.

By Mr. Colton:

Q. This statement also included 417,000,000 tons on the Cuyuna range, of which you know nothing, does it not?

A. Yes.

Q. Where did you get this total of 28,800,000 under the Gogebic range?

A. From the Finlay report.

Q. As to these different ranges your testimony would be the same? I will name the ranges, Gogebic, Marquette and Menominee: your testimony in regard to those would be the same that you have just testified to in regard to Exhibit No. 104, would it not, as to what you had to do with getting together these totals?

A. Yes.

Mr. Colton: I object on the same ground as to the preceding exhibit, 104. I also object to the witness' testimony in regard to 417,000,000 tons on the Cuyuna range on the ground that it is hearsay.

Mr. Reed: I ask counsel for the Government to point out any place in this witness' testimony where he has testified that that was his estimate of the tonnage on the Cuyuna range.

MR. COLTON: I object to this exhibit in so far as it purports to show 417,000,000 tons on the Cuyuna range, on the ground that the witness is not competent to prove that estimate.

By MR. COLTON:

Q. Now, turning to Defendants' Exhibit No. 102, entitled "Iron ore properties in the Lake Superior district held by the United States Steel Corporation," containing in section 1, "properties held prior to the formation of the United States Steel Corporation," and section 2, "properties acquired since its formation." In the statement, in so far as it relates to the reserves as of January 1st, 1912, I understand that you only include in the Corporation's ore eighteen and some odd thousands, as you have testified as to the previous exhibit. This does not show anything in regard to independents, does it?

A. No.

Q. Mr. Sebenius, has there not been a very considerable difference in iron content in what was regarded as merchantable ore in 1901 and what was regarded as merchantable ore in 1912?

MR. REED: Objected to as not cross-examination.

MR. COLTON: If you are familiar with the subject.

THE WITNESS: There has been some lowering.

By MR. COLTON:

Q. That lowering has been about three or four per cent. of iron content, has it not?

A. I should say three per cent.; it varies with the different ranges.

Q. For the Mesabi range has it been about three or four per cent.?

A. About three per cent.

Q. And in this exhibit there would be that same correction that the Corporation made in its tonnage of about two million tons, by raising it about two million tons?

A. Yes.

MR. REED: I do not understand the question; do you mean

that the correction was made before this statement was run off?

MR. COLTON: I do.

THE WITNESS: That statement was based on corrected and adopted figures.

By MR. COLTON:

Q. Under the heading of reserves in 1901, referring to the summary—I do not know that the pages of this exhibit are numbered, but the exhibit contains a summary—referring to the summary entitled "properties held April 1st, 1901," this exhibit does not purport to show that those ores were known or developed ores in 1901, does it?

A. No, sir.

Q. And it does not purport to show that they were known available merchantable ores at that time, does it?

A. No, sir.

Q. All the exhibit attempted to do was to add shipments to what you took as the tonnage of the United States Steel Corporation of January 1st, 1912, is that right?

A. Not quite.

Q. Well, explain.

A. I should say that the tonnages are those tonnages that we got from information as of January 1st, 1912, known to exist on that property then.

Q. Known to exist on January 1st, 1912?

A. Yes, from the information then at hand.

Q. In the manner that you testified that you knew it to exist because you found it in that copy which you took from the Minnesota Tax Commission; is that correct?

A. Yes.

Q. Referring to Defendants' Exhibit No. 101, entitled "List of Mesabi Range properties containing ore submitted to various companies subsidiary to the United States Steel Corporation, but not acquired by said Corporation or any of its subsidiaries," you can not, Mr. Sebenius, without looking at that exhibit, testify as to the accuracy of the figures appearing there?

A. I could not from memory do so, no.

Q. And if you looked at the exhibit, would you know whether it was a number of tons off one way or the other, of your own knowledge, as to each of those different properties?

A. Well, these figures are figures that the Tax Commission reports should show.

Q. It will show it, but did you find them in the Tax Commission's report?

A. Yes, sir.

Q. Now, you went to the Minnesota Tax Commission and took all these various properties here shown, and looked at the number of tons now reported in each one of these various properties; is that correct?

A. Yes, sir.

Q. When did you go to the Minnesota Tax Commission in order to check that up?

A. I could not exactly say the time I checked up these tonnages, but I was in the Tax Commission from time to time during the year 1912.

Q. Did you check up all these tonnages yourself?

A. I think I did; I am pretty sure I did.

Q. These tonnages are shown as of May 1, 1912?

A. Yes.

Q. It did not show anything about as of the date of offer, did it?

A. No.

Q. And this exhibit does not purport to show anything about the tonnages as of the date of offer, does it?

A. No, sir.

Q. Then these properties at the time they were offered, so far as this exhibit goes, may not have had any developed ore in them; is that right?

A. Well, some had and some did not.

Q. The percentages of iron content here shown were also as of the year 1912, were they not?

A. Yes, sir.

Q. As to the royalties, did you get those from the Minnesota Tax Commission too?

A. No, sir.

Q. The rate of royalty?

A. No, sir.

Q. I did not hear that.

A. No, sir.

Q. Where did you get those?

A. I got them from our own records.

Q. Did you get them personally?

A. I do not believe I did, no, sir; I had them compiled from the records by my department.

Q. And accepted them as correct?

A. I had to. That was the only way I could get it.

MR. COLTON: I except to the entire exhibit, as shown by the testimony of this witness to be based in part on hearsay, and the witness himself not being competent to testify to it; and to the exhibit itself as secondary, the documents upon which it is based not being produced, and as showing tonnages of different date from the date at which the various properties were tendered, and, therefore, immaterial.

MR. REED: Now, just before Mr. Colton made that objection the witness said something which I could not hear. Did you get it, Mr. Stenographer?

(The question and answer were read by the stenographer as follows:)

"Q. And accepted them as correct?

"A. I had to. That was the only way I could get it."

MR. COLTON: That is all.

RE-DIRECT EXAMINATION

By MR. REED:

Q. Mr. Sebenius, this total of 860,000,000 odd tons of Steel Corporation ore on the Mesabi Range is made up of the—

MR. COLTON: (Interposing) Would you mind giving me the exhibit, Mr. Reed?

MR. REED: I have not the original exhibit, Mr. Colton. I gave you a copy of it yesterday.

MR. COLTON: I just meant the number. If you will refer to it.

MR. REED: 104.

By MR. REED:

Q. (Continuing)—is made up of the details shown on Exhibit No. 102, is it not?

MR. COLTON: I object to counsel leading the witness.

MR. REED: Do you think it is likely, Mr. Colton, that we could get a figure ranging into the odd unit on 860,000,000 by leading, and have the satements check exactly?

MR. COLTON: You made it as a statement.

MR. REED: No.

THE WITNESS: Yes, sir.

By MR. REED:

Q. This statement, No. 102, shows the detail of the Steel Corporation's ownerships on the different ranges that are shown in totals on Exhibit No. 104; is that correct?

A. Yes, sir.

MR. REED: That is all.

RE-CROSS EXAMINATION

By MR. COLTON:

Q. And both exhibits are prepared from the same source?

A. Yes, sir.

Q. As testified on your cross-examination?

A. Yes, sir.

MR. COLTON: That is all. I renew my objection to Exhibit No. 102, on the grounds previously stated.

MR. REED: That is, that the witness did not add it himself?

MR. COLTON: What is that?

MR. REED: That the witness did not add the figures himself?

MR. COLTON: Will you read the last question and answer of Mr. Sebenius that Mr. Reed put to him?

(The question and answer were read by the stenographer.)

MR. COLTON: I renew my objections to Exhibits 102 and 104, on the same grounds as stated previously. That is all.

MR. REED: The defense offers in evidence the title page of the volume entitled "Third Biennial Report of the Min-

nesota Tax Commission, to the Governor and Legislature of the State of Minnesota, 1912. Syndicate Printing Company, Minneapolis, Minnesota." Also Chapter 5 of that volume, headed "Mines and Minerals," extending from page 58 to page 100, both inclusive; and the Defendants ask to have printed that part of pages 92 to 95, both inclusive, beginning with the words "the 1912 assessment" on page 92, and running down to the bottom of page 95, with, of course, the understanding that if there is any other part of this chapter that the complainant wishes to have printed at the same time, that may be done.

MR. COLTON: I object to the report as incompetent, and on the ground that it relates to a period subsequent to the filing of the Government's bill in this cause.

(The extracts referred to above were thereupon marked "Defendants' Exhibit (Sebenius) No. 105, October 7, 1913," and will be found in the volume of exhibits.)

FRANK L. NASON,

called as a witness on behalf of the Defendants, and being first duly sworn, testified as follows:

DIRECT EXAMINATION

By MR. REED:

Q. Where do you live, Mr. Nason?

A. In Westhaven, Connecticut.

Q. What is your occupation?

A. Consulting mining geologist.

Q. How long have you been engaged in that business?

A. You mean in the consulting work exclusively?

Q. Yes.

A. Since about 1895.

Q. Prior to that what was your occupation?

A. Assistant State Geologist of New Jersey and in charge of iron ores especially; and as Assistant State Geologist of Missouri for about three years, also in charge of iron ores.

Q. Were you also acting state geologist of New Jersey?

A. Yes, sir; after the death of the state geologist in 1889 I was acting state geologist for the years 1889 and 1890.

Q. How long has your geological experience continued? How long have you been a geologist?

A. I have been active professionally 25 years. I began my first professional work in 1888 as assistant state geologist in New Jersey.

Q. Since 1907 have you had any professional connection with any large ore mining or furnace company in New York State?

A. In New York State, yes.

Q. What company?

A. Witherbee, Sherman & Company.

Q. Where are their New York iron mines?

A. They are in Essex County, New York, and, I think, it is, in Clinton County also. It is in Ausable Forks.

Q. That lies up in the neighborhood of Lake Champlain, does it?

A. Both of them lie in the neighborhood of Lake Champlain.

Q. Are you familiar with the iron ore fields that are found in the Adirondack region?

A. Yes, sir; I have made a pretty thorough study of them all.

Q. You have been over the field repeatedly, have you?

A. A part of the field I have been over repeatedly and very carefully, from a professional standpoint; that is, I mean from a professional standpoint as consulting mining geologist; and the western part of the field more from a geological standpoint, as comparing that field with the field with which I was well acquainted in New Jersey and southeastern New York.

Q. I was coming to that. How long have you been familiar with the iron ore field in New Jersey and southeastern New York?

A. Twenty-five years.

Q. Have you been in the different mines in this New Jersey and lower New York district?

A. I think there is not an iron mine in New Jersey that

in the Adirondack region. How long has iron been mined in that Lake Champlain district?

A. I think the reports show that it was mined before the Revolutionary War on a small scale, and in fact around in Clinton County, New York; that is around Arnoldville and the town of Ausable Forks.

Q. Have you made an estimate of the quantity of merchantable iron ore in the properties of Witherbee, Sherman & Company at Mineville and Arnold?

A. I would want the term "merchantable" defined; that would cover a little too much ground offhand.

Q. Have you made any estimates?

A. Yes, I have made an estimate of what I would call economic iron ore.

Q. What is economic iron ore?

A. An economic iron ore is one that can be mined and sold at over the cost of production.

Q. What estimate of tonnage of ore of that kind have you made?

A. Of Witherbee, Sherman & Company?

Q. Witherbee, Sherman & Company alone at Mineville and Arnold.

A. 250,000,000 tons.

Q. Does that ore require concentration?

A. It does; that is, the greater part of it will require concentration.

Q. Then, reducing that estimate to terms of what we might call furnace ore; that is, either ore which in its natural state is ready to be charged in the furnace, or concentrates, what tonnage of furnace ore would that give you?

A. It would be divided by two to two and a half, in order to get at the exact number of tons of concentrates that would run from 60 to 65 per cent. metallic iron.

Q. Can you give us the result of that calculation?

A. Do you mean in round numbers? I should think about 100,000,000 tons.

Q. Have you made an estimate of the quantity of ore of the same kind which is owned by other interests than Witherbee, Sherman & Company in those two districts?

A. Not as careful an estimate, but I have made an estimate. It was made for my own benefit more than anything else.

Q. Are those deposits sufficiently regular to permit a close estimate of tonnage to be made?

A. Very close estimates of tonnage.

Q. What estimate, then, have you made for the independent owners outside of Witherbee, Sherman & Company?

A. One of about 250,000,000 tons run of mine; one of 200,000,000 tons run of mine; one of about 50,000,000 tons run of mine, and another of about 100,000,000 tons run of mine.

Q. You mean those are estimates of different districts?

A. I do not know whether I would say different districts or not, because I would classify the Adirondack ore, so far as known, as being in three districts; the northern district, or St. Lawrence; the southern, or Mineville district; and then the western district in St. Lawrence County, which is in the western part of the Adirondacks.

Q. Now, separating the different districts, will you give us your estimate of the economic tonnage, as you call it, in the St. Lawrence district?

A. In the St. Lawrence district—I have got these figures all in my mind—about 200,000,000 in one; these are run of mine; and about 100,000,000 in another; that would be in the western or St. Lawrence County district.

Q. What district does Mineville lie in?

A. That, I should say, is the southern district. This is a name of my own, just for division, and it is not public at all—the Essex County or Mineville district.

Q. What do you call the district in which the Lyon Mountain deposits lie?

A. That is in the northern or St. Lawrence district.

Q. What do you call the district in which the Benson deposits lie?

A. That is in the western district.

Q. Taking the three districts as a whole, if you will, what tonnage of economic ore did you estimate for those three districts as a whole?

A. It would foot up to between 775,000,000 and 800,000,000 tons.

Q. And reducing that to terms of furnace ore or material available for use at the furnace, what tonnage have you?

A. You would have to divide that sometimes by two and sometimes by two and a half; in other words, the ratio of concentration would be two run of mine to one ton 60 to 65 concentrates, and in other cases it might be two and a half run of mine to one ton 60 to 65 concentrates.

Q. That is to say, two and a half would still give you what?

A. I would say that would leave you a good margin.

Q. What tonnage of furnace ore would that yield?

A. Well, divide 800,000,000 by two and a half.

Q. A little bit over 300,000,000?

A. A little bit over 300,000,000.

Q. Now, at what points are those ores of the Adirondack region being mined at the present time?

A. At Witherbee, Sherman & Company's mines, in Essex County, New York; the Lyon Mountain mines, I think those are in Clinton County, New York; that is in the northern district, anyway; and again at what is known as the Cheever mines on Lake Champlain, also in Essex County, New York. I think the Benson mines are also operated now in the western district.

Q. Where are those ores being used?

A. Where the Benson ores are used I cannot tell, a large part of the concentrates from Lyon Mountain are used at Standish Furnace.

Q. Where is that?

A. That is not a great way distant from Lyon Mountain; whether they ship ores elsewhere from Lyon Mountain or not I do not know. The Cheever mine, that is in Essex County; I do not know exactly where those ores are shipped, and I can only guess at that. Witherbee, Sherman & Company's concentrates, I do not know where they are shipped. I know that part of them are used at the Port Henry furnace, but the bulk of them, I should think, are shipped to other points.

Q. Do you know whether the Lackawanna Steel Company at Buffalo uses any of those ores?

A. I do not know positively that they do. I know that they are interested with Witherbee, Sherman & Company in those mines.

Q. They have an interest in the Witherbee, Sherman & Company's mine, haven't they?

A. Yes.

Q. Do you know whether any of these Witherbee, Sherman & Company ores are shipped to the Bethlehem Steel Company?

A. Not of my own personal knowledge, no.

Q. That would be hearsay, would it?

A. That would be hearsay.

Q. Now, coming down to the New Jersey and southeastern New York district, how many working mines are there in that deposit?

A. Across the river in New Jersey?

Q. Yes.

A. I will have to give them to you by name. There is the Peters mine, the Hibernia mine, the Hickory Hill mine, the Mount Hope mine and the Washington mine. Those are all that I know positively are working now.

Q. Have you been in all those mines?

A. I have been in all those mines.

Q. Have you ever considered or studied the manner in which these ores are deposited?

A. Very carefully.

Q. Have you endeavored to find how far these ore bodies extended?

A. Yes, sir; that has been a good part of my work.

Q. What are those ores in New Jersey; magnetites or hematites?

A. Well, those that I have dealt with and am dealing with now are exclusively magnetites.

Q. Did you ever see or know of a deposit of magnetite of that kind being exhausted?

A. I have never seen——

MR. DICKINSON: He has not said he knew of any other of that kind, except that.

THE WITNESS: Of magnetites?

MR. REED: Well, it is to be assumed, I think, Judge Dickinson, that any man who has studied geology has heard of other magnetites.

MR. DICKINSON: You did not ask him what he had heard of; you asked him what he had seen.

MR. REED: I asked him whether he had ever seen or heard of any.

MR. DICKINSON: Read the question, please.

(The question was read by the stenographer.)

MR. DICKINSON: I did not think you said "heard."

MR. REED: No, but it is the same thing.

MR. DICKINSON: If that is your idea, very well.

THE WITNESS: I am trying not to say anything about what I have heard. No, I have never seen a magnetic iron ore deposit that I considered exhausted. I have seen them where they have gone up against a fault; that is, where the ore body has suddenly terminated against a face of rock, and I have succeeded by means of diamond drills in locating the ore body beyond that fault, so it was practically a continuation. It was simply a dislocation at the time.

By MR. REED:

Q. How far have such ore bodies been followed with shafts in the New Jersey mines?

A. Well, by pitch shaft—that is, following down on the long axis of the ore body, one of a recorded depth of 7,500 feet on the pitch line.

Q. How is the ore hoisted out of that shaft?

A. There is a hoisting engine at the head of the slope, a regular skip, connected with the hoisting engine by a wire rope, and that wire rope plays out as the skip goes down and is hauled up.

Q. You have been in the Lake Superior district, have you?

A. I never have.

Q. What is the angle at which that slope goes?

A. I shall have to be very careful in distinguishing be-

tween what we call "pitch" and "dip." The enclosing rocks dip to the southeast at an angle of about 70 degrees, and on the plane of the rocks the ore bodies pitch at an angle of about thirty degrees. It varies in different places, but about thirty degrees.

Q. Well, what is the angle at which this shaft departs from the vertical?

A. It is about thirty degrees to the horizon—to the plane of the horizon.

Q. Do you know of any other deep workings in such mines?

A. No other as deep as that. The Sterling Lake mine is carried on a slope of 2,500 feet under the lake—under Sterling Lake. I have been down to the bottom of that slope.

Q. How about this mine in New Jersey which has been worked to a depth of 7,500 feet along the line of the vein? Was ore found at the bottom of it?

A. At the exact depth of 7,500 feet I never was down. The deepest part I ever was down was about close to 6,000 feet, and there the ore was just of the same quality and just of the same size that they had followed down for nearly 6,000 feet.

Q. Did they stop when they got down to the 7,500 foot depth?

A. They did.

Q. For what reason?

A. Well, this is hearsay, but I got it direct from the operator, so perhaps it will stand.

Q. You need not worry about the hearsay.

A. In the first place, it was close to an adjoining property line, and they could not get an option or get a lease on that ore without paying a royalty of 50 cents a ton for the ore. In addition to that, the lease with the owners of this mine was just about expiring, and in addition to their royalty of 50 cents a ton that they were asking on those ores that were being mined at that depth, they wanted a charge of 50 cents a ton for the use of their old mine slope in hauling up the ores on the adjoining property, and a dollar a ton against

those ores was considered a little too steep, and the lease was surrendered.

Q. What percentage of iron content is found in those ores?

A. I cannot give you the exact figure of this mine, but the average ores shipped—that is, the run of mine shipments from New Jersey, will be about 55 per cent. metallic, non-Bessemer.

Q. And was this ore better than the average?

A. I think not.

Q. From this very deep mine?

A. I think not. I think it averaged about 55. It might have averaged a little better than that.

Q. Non-Bessemer ore, was it?

A. Non-Bessemer.

Q. Where was that ore being shipped to?

A. I cannot tell positively now, but I think it was to what they called the Valley furnaces. It may have been to the Thomas Iron Company, and some furnaces in Catasauqua, Pennsylvania.

Q. Are they shown on this Exhibit No. 106?

A. I understand that the Thomas Iron Company's furnaces are located at Catasauqua, Pennsylvania. No, none of those furnaces are shown in New Jersey.

Q. Where is Catasauqua, Pennsylvania?

A. I cannot tell you exactly where it is, although I think they go to Bethlehem, Pennsylvania, and up in that direction somewhere. I think it is about seventy miles from Oxford Furnace, New Jersey.

MR. COLTON: It is after four, Mr. Reed.

MR. REED: Very well.

(Whereupon an adjournment was taken until to-morrow, Wednesday, October 8, 1913, at 10:30 o'clock a. m.)

TRANSCRIPT OF RECORD.

SUPREME COURT OF THE UNITED STATES.

OCTOBER TERM, [redacted] 1919

No. [redacted]

THE UNITED STATES OF AMERICA, APPELLANT,

vs.

UNITED STATES STEEL CORPORATION ET AL.

APPEAL FROM THE DISTRICT COURT OF THE UNITED STATES FOR THE DISTRICT OF NEW JERSEY.

VOLUME 17.

DEFENDANTS' TESTIMONY.

FILED MAY 12, 1916.

VOLUME XVII.

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Stipulation.

Stipulation with regard to letter of October 9, 1913, from Dr. C. K. Leith 6917

NINETY-FIRST DAY.

EMPIRE BUILDING,
71 BROADWAY, NEW YORK CITY,
WEDNESDAY, OCTOBER 8, 1913.

Before Special Examiner JOHN ARTHUR BROWN.

Present on behalf of the United States, MR. DICKINSON and MR. COLTON.

Present on behalf of the Defendants, MR. LINDABURY, MR. SEVERANCE, MR. BOLLING and MR. REED; also, on behalf of the Great Northern Iron Ore Interests, MR. CHESTER W. CUTHELL.

FRANK L. NASON,

the witness under examination at the taking of the adjournment, resumed the stand.

DIRECT EXAMINATION (Continued)

By MR. REED:

Q. You had given us an estimate of the total economic iron ores, as you call them, in these three districts in the Adirondack region, Mr. Nason. I wish you would state approximately what percentage of the iron-bearing district is included in the deposits, or sub-districts, that you have in consideration in making your estimate?

A. That is in the Adirondack region?

Q. Yes.

A. Just roughly I should say that this territory covers about ten per cent. of the entire ore-bearing gneisses of the Adirondack region.

Q. And from your knowledge of the geology of the Adirondacks, do you think it probable or otherwise that further developments of economic iron ores will be made?

A. I have no reason to doubt that at all. Whether they would prove productive in the same ratio as these districts, I could not say.

Q. Of course not. Now, I want to ask you a little more about the basis on which you make your Adirondack estimates. I wish that you would tell us, first, about how many separate deposits enter into the estimate which you gave us yesterday.

A. You mean separate mines?

Q. Yes; put it that way.

A. Perhaps I had better say mine belts. I think that would answer the question a little more intelligently or comprehensively than it would otherwise. Six.

Q. With what degree of certainty can the contents of these deposits in the Adirondacks be measured? Will you describe the manner in which the ores lie, the outcrops that appear, and the depth to which the veins have been measured and tested?

A. These magnetic iron ore bodies belong to the class that is known as lenticular deposits. The long axes of these lenses pitch under ground on a plane that dips from the horizon. You can judge something of the size of these lenses by the size of the outcrop on the surface; that is the relation of these three axes of the lenses to each other is so well worked out that one can make a very close estimate of what any one lens will produce.

Q. What length of outcrop do you find in these ore bodies?

A. At Lyon Mountain I think the outcrop is about four miles in length and the thickness there would vary from three feet up to over 100 feet.

Q. That is, at the outcrop.

A. At the outcrop.

Q. And how deep have the workings gone; what length of shaft?

A. I think that Lyon Mountain goes down to 1,400 feet; it may be deeper than that now.

Q. Are there other outcrops of a similar length in this Adirondack region?

A. In the Adirondack region one outcrop, to my certain knowledge, is about 9,000 feet long.

Q. How deep are some of the workings in these lenses of ore in the different Adirondack districts?

A. I have to give that between perpendiculars. One I know of is 2,000 feet from the outcrop to the known end.

MR. DICKINSON: Does the witness mean that from a level equal to the outcrop down to where the end is it is 2,000 feet?

THE WITNESS: I am reckoning this on the horizontal; that is, the outcrop is, we will say, at one point, and then, vertically over the end would be the other length; but the actual length would be longer, according to the degree of departure from the horizontal. It would be in the relation of a hypothenuse to one side of a triangle.

By MR. REED:

Q. In other words you are giving the—

A. I am giving the horizontal distance.

Q. While the shaft is the hypothenuse?

A. The slope of the ore body would be just exactly, as a matter of illustration, the hypothenuse; so that would be longer that either side of the triangle.

Q. Now give us this horizontal distance in the different workings you are familiar with.

A. This is about 2,000 feet in the outcrop, vertically above the end.

Q. Have any other tests been applied in order to determine the length or extent of those lenses of ore?

A. Several different tests in my personal experience. We wanted to prospect ahead of the working place, and we have taken dips and strikes and pitches—these are all technical terms in a way—and then calculated where the ore body ought to be, and then put drill holes down and caught the ore.

Q. You caught the ore in the location in which you prophesied you would find it?

A. Yes; we have done that on several different occasions.

Q. Now, what distance from the outcrop have those diamond drillings been put in?

A. One drill hole is horizontal 3,500 feet from the outcrop; I do not remember just the depth, but they cut 22 feet of ore.

Q. From your experience of that kind can you make any general statement as to the continuity of those veins or lenses of ore in that district?

A. In general terms and in very broad terms the expectation of the end of one of those ore deposits would be determined by the extent of the formation in which those ores occurred.

Q. Can you make it a little more definite than that?

A. Yes; we will say that ore is found in a magnetic ore-bearing gneiss; in that we have found the outcrop of the iron ore. Now, in general terms there is nothing in our experience that would forbid us to expect that that iron ore lens would reach just as far as the magnetic ore-bearing gneisses reached.

Q. In particular cases how far do those gneisses reach?

A. Why, in dropping that extreme generality and coming right down to particulars, there is one place I know of where the outcrop is continuously exposed for over 4,000 feet, nearly 5,000 feet. At one end of that mining operations have been carried down for 2,500 feet on the slope. About the other end of that, and also at right angles to the outcrop, a series of workings and drill holes have proven that the ore body existed 3,600 feet west of the north and south outcrop.

Q. Now, I want to ask you a word as to the products of concentration of these ores. Are they being concentrated at more than one place?

A. Yes, they are to my certain knowledge.

Q. Do those ores in their natural state carry phosphorus beyond the Bessemer limit?

A. Some of them do and some do not.

Q. In the case of those ores which do carry phosphorus in excess of the ratio to the iron which is considered the Bessemer limit, how about the products of concentration, both Bessemer and non-Bessemer?

A. The phosphorus is very largely eliminated in the process of concentration, and the question of reducing the phosphorus to the Bessemer limit would be just simply a matter of grinding, crushing and treating with magnetic separators.

Q. Take particular cases of concentrating plants of which you have personal knowledge; are their concentrates Bessemer or non-Bessemer, as a general thing?

A. Some of them are Bessemer grades.

Q. Is it possible for the others to produce Bessemer concentrates from the Adirondack ores on which they are working, by further grinding?

A. Yes.

Q. Let us come down to the New Jersey district, with which you say you are familiar. I do not know whether I asked you yesterday how long those New Jersey mines had been operated?

A. Why, records seem to indicate that 1760 was the first, or about that time, that they were first operated, but of course on a very small scale.

Q. Have they been operated fairly continuously since that time?

A. Since 1890 I think they have been operated almost continuously. Of course they have closed down for a few months or sometimes a year or so at times.

Q. I do not know whether I asked you in how many different locations those New Jersey ores were being used in furnaces.

A. I can tell you by positive knowledge where they are used, and whether they are used in other places or not I cannot tell.

Q. Tell us those of which you have positive knowledge.

A. One is at Wharton's Furnace, at Wharton, New Jersey; another is at Oxford Furnace.

MR. DICKINSON: Where is that?

THE WITNESS: That is near Washington, New Jersey; and then a furnace which is not in operation is at Riegelsville, Pennsylvania; and one at Phillipsburg.

By MR. REED:

Q. Is that in operation at Phillipsburg?

A. I am not sure whether it is now. I am very sure that the Riegelsville furnace is not in operation. And then a furnace as Catasauqua, Pennsylvania.

Q. That is near Allentown?

A. Yes.

Q. What tonnage of economic available ore do you esti-

mate that there is contained in the New Jersey deposits of which you have been speaking?

A. Well, from 2,000 feet up I should put it at something like 130,000,000 tons.

Q. Does some of that ore require concentration?

A. The larger part of it requires concentration.

Q. Some of it does not?

A. Some of it does not require concentration.

Q. Now, reducing that estimate to terms of what we might call furnace ore, that is, the material which either in its natural state or after concentration is suitable for furnace use, what tonnage can be relied on to be produced from these New Jersey deposits?

A. I should say in round numbers about 40,000,000 tons or upwards of 60 per cent. grade.

Q. Of that 130,000,000 tons, how many million tons are what we call shipping ore? That is, ore available for furnace use in its natural state?

A. About 30,000,000 tons, I should say.

Q. From the remaining 100,000,000 tons, what tonnage of concentrates running 60 per cent. or over in iron can be counted upon?

A. 40,000,000 tons.

Q. So that if I have followed you there are 70,000,000 tons of what we might call furnace ore, which could be obtained from the New Jersey deposits above the 2,000 foot level?

A. That is correct.

Q. These deposits extend over into New York, do they not?

A. Into southeastern New York, yes.

Q. What counties of southeastern New York?

A. Orange County and—I do not know that I can tell you. It is just across the line of the Hudson River from West Point; in Dutchess County, I think it is, where two or three mines have been operated.

Q. Do these deposits extend into Dutchess County?

A. I think so. I would not want to be sure about the counties.

Q. Well, Poughkeepsie is in Dutchess County.

A. It is in the neighborhood of the Brewster mines in New York.

Q. Is there any in Putnam County, New York?

A. I think so; I do not recall that. If I could see the location on the map, I could tell at once.

Q. It is near Brewster, is it?

A. Yes, in that vicinity.

Q. Are there any mines being operated in that neighborhood?

A. I think not; no.

Q. Have any mines been operated there in the past?

A. Yes, sir.

Q. What tonnage of ore above the 2,000 foot level do you estimate there is contained in this southeastern New York district?

A. I am not as familiar with that—with the southeastern New York district, as I am with the New Jersey, but from fairly careful study I should add 60,000,000 tons at least to the 130,000,000.

Q. That is all crude ore?

A. Crude ore.

Q. And would that be concentrated?

A. A great deal of it would be concentrated.

Q. At about the same ratio?

A. At about the same ratio.

Q. How many tons of shipping ore might we expect from that 60,000,000; that is, ore which is available for furnace use in its natural state?

A. I could not tell you that. I know two mines that are shipping ore—run of mine—now.

Q. Mines that are operating to-day?

A. Mines that are operating to-day.

Q. At what location?

A. Or at least within a few weeks I have known of their being operated. That is the Sterling Lake mines and the Forest of Dean mines.

Q. And where are those mines?

A. The Forest of Dean is close to the Hudson River, and

the Sterling Lake mine is close to the New Jersey line, near Greenwood Lake.

Q. I want to ask you about these ores that are brought from the very low levels in the New Jersey mines, about which you testified yesterday. I think you told us that one mine was down 7,500 feet.

A. Yes.

Q. About what iron content do you find in the ores that come from that level? I mean in this particular New Jersey mine.

A. I could not give you the exact figures from that mine; that is, the exact percentage of iron, but it does not run lower than 55 metallic iron.

Q. Does it run much over 55?

A. I do not think it does.

Q. Is it a Bessemer or a non-Bessemer ore?

A. It is non-Bessemer ore.

Q. And has it been found commercially profitable?

A. I suppose so. They have been operating the mines at that depth on a slope.

Q. About these New Jersey mines, as a general thing have they been running full in recent years?

A. Why, since my first connection with the state survey they never have run below 250,000 tons a year, and they have run close to 600,000 tons a year output; that is, the total output.

MR. DICKINSON: Is that New Jersey?

THE WITNESS: New Jersey alone.

MR. REED: That is New Jersey alone.

By MR. REED:

Q. I neglected to ask you the tonnage of ore that is annually produced from these different New York mines. Can you give us the Adirondack region first?

A. I could not give you the total tonnage of the output of the Adirondack region. I know it is in excess of 600,000 tons.

Q. How much do the Witherbee-Sherman Company's properties produce up at Lake Champlain?

A. In the one year that I was specially familiar with them I think they had an output of over 600,000 tons.

Q. In an exhibit previously put in evidence by the Government in this case I find that in the year 1911—this in page 2575 of your Volume 12—I find that in the year 1911 New York produced 1,028,194 tons of magnetite. From what districts is magnetite produced in New York?

MR. COLTON: Will you excuse me just a moment, Mr. Reed? Are not those shipments for 1911 marketed tonnages for 1911, instead of production?

MR. REED: I think you are right, Mr. Colton; yes.

MR. COLTON: There would not be a very great difference, but there would be some difference.

MR. REED: I will give the 1910 figures afterwards. Instead of saying there was produced, say there was marketed of New York ores in 1911 that quantity—1,028,194 tons.

By MR. REED:

Q. Now, from what districts are the New York magnetites produced?

A. From the northern New York, and then from the Mineville district.

Q. That is all in the Adirondack region, is it?

A. I do not know whether the western belt—that is, represented by the Benson mines—shipped any in that year or not.

Q. But even if it did, it is all in the Adirondack district?

A. Yes, all in the Adirondack district.

Q. Now, I find that in this same exhibit, including brown ore, the production of magnetite in 1910 in the State of New York was 1,222,471 tons. Where is brown ore produced in New York?

A. I would not want to state too positively about that, because they have not especially interested me, but I know that southeastern New York has at one time and another produced a good deal of what is known as brown hematite ore.

Q. I notice that in 1910 this exhibit states that 64,738 tons of hematite were produced.

MR. COLTON: Will you give me the page, Mr. Reed?

MR. REED: Page 2,574.

By Mr. Reed:

Q. (Continuing) Whereabouts in New York State does hematite ore come from?

A. That is the red hematite?

Q. It is mined in what district?

A. That is the red hematite you are referring to, is it not; not the brown?

Q. This exhibit does not state what kind of hematite, but I assume it is red hematite, because brown ore is included with magnetite in these figures.

A. Yes. Red hematites are produced in two localities in New York, and widely separated in geological age. One is the hematite mines near Antwerp, New York; that is in northwestern New York; and the other is in the Clinton iron ore formation, that stretches south of the Great Lakes region and runs east and west.

Q. I neglected to ask you, Mr. Nason, what corporations or individuals are interested in these New Jersey ores. Will you give us the names of some of the owners of operating mines?

A. The Thomas Iron Company; the Empire Steel & Iron Company; the Wharton Steel Company, I think it is, or Wharton Steel & Iron Company, I do not know which; and the Ringwood Company.

Q. How about the Chester Iron Company? Has it any—

A. (Interposing) The Chester Iron Company has mines. I do not think they are operating now.

Q. How about the Hewitt estate?

A. That is the Ringwood mine.

CROSS-EXAMINATION

By Mr. Dickinson:

Q. Professor Nason, did you make the map to which you referred yesterday, lying there before you?

A. I did not, no.

Q. What scale is it made to?

A. I can not tell the exact scale. It is given on there.

Q. Look on the map, please, and see what the scale is.

A. Here it is (indicating).

Q. What do you mean by "here?" Please explain so that it will show on the record.

A. I am talking about this map. The scale is ten miles in four-tenths of an inch. It is rather an awkward scale—four-tenths of an inch is equal to ten miles.

Q. Is there any statement on there showing that?

A. It is just the scale of miles, and then these figures are given. Ten miles on this map equal to four-tenths of an inch.

Q. That is Exhibit No. 106?

A. Defendants' Exhibit No. 106, yes.

Q. Did you have anything to do with making that, at all?

A. I did not, no.

Q. You do not know anthing about its accuracy?

A. Yes, I do know something about its accuracy.

Q. If you did not make it and had nothing to do with making it, that is just a general opinion you have, is it not?

A. No, it is not a general opinion.

Q. It is not a general opinion?

A. No, sir; I know the distance from the New York State line to the Delaware River and from the New York State line to the Hudson River. I know about those distances, and I know that those distances correspond very closely with what this map shows.

Q. Is it based upon that knowledge that you have stated that you say the map is correct?

A. It is based upon personal knowledge that I state the map is approximately correct.

Q. I mean personal knowledge of the facts you have just stated? Is it upon that you say the map is correct?

A. Yes, it is.

MR. REED: You do not want to leave it in that way, do you, Judge? He has testified the map shows the correct location of these ore-bearing rocks.

MR. DICKINSON: Counsel can re-examine the witness if he wants to, but I object to counsel making statements of that kind.

By Mr. Dickinson:

Q. Do you want to make any explanation of your last answer?

A. No further than this, that I have been over that belt, from the Delaware River to the Hudson River, repeatedly, and have helped to make the geological maps that are published in the New Jersey survey, and to the best of my knowledge and belief, the distance from the Hudson River to the Delaware River in a straight line is about 70 miles.

Mr. Reed: You were not asked particularly about that, Professor Nason. The question applied to the whole map, including New York as well as New Jersey.

By Mr. Dickinson:

Q. I am asking now as to the entire map. How far you can say, of your own knowledge, not having made the map and not having had anything to do with making the map, that the map is correct. I want you to say why you say it is correct, if you say it is. I just want to know the basis of your statements; that is all.

A. The map, so far as it shows the magnetic iron ore belt in New Jersey from the Delaware River to the Hudson River, is correct. In the Adirondack region I have been around the mountains and through the mountains a good many times. While I have never made any accurate survey of that section, I know that that map is essentially correct.

Q. Just from going around and through the mountains, without any survey, you assert that you know that map to be correct? Is that right or not?

A. I said, "particular survey." I did not engage in any map making in the Adirondack region at all.

Q. Can you tell, from going through a country from time to time, without making any surveys and measurements yourself, whether or not a map of that country is substantially correct?

A. The Delaware & Hudson Railroad parallels the Adirondack region from its southern point near Whitehall, New York, clear through to Plattsburg, and when I ride on that train from Whitehall, New York, I do not have to make a

particular survey to know that I have traveled a certain number of miles. I can just look at the railway time table and see that. When I drive from Port Henry, New York, west through the Adirondack mountains, and notice from time to time that I am in iron-bearing rocks, and I know the distance from my livery bill, and measuring across the map, that the distance is about so many miles——

Q. This map purports to show, does it not, the iron-bearing regions there?

A. It does.

Q. Is it from that kind of information, derived just as you have explained, that you are enabled to say that this map is correct in respect of its showing of the ore-bearing regions in that part of the country?

A. I would like to understand that question thoroughly.

(By request, the stenographer repeated the question.)

A. I carried geological maps with me that were made by the United States Government, and when I have driven from one place to another, or when I ride on a railway train from one place to another, when I have studied the maps that have been made of the Adirondack region by the United States Government, and checked up from my own observations, I conclude that I am pretty nearly correct, so far as area is concerned.

Q. When did you first see this map?

A. I think it was yesterday.

Q. Did you check this map by any of these geological maps?

A. I did not.

Q. Well, now, is there any other source of information or basis of information other than you have given which enables you to state that that map is correct? If so, please give it. I want to know the foundation for your statement.

A. The full foundation for my statement is more or less familiarity with these regions for twenty-five years.

Q. Now, is that all that you have to say, or do you want to say anything more, to justify your statement that you have found this map to be correct?

A. I do not say that this map is absolutely correct.

Q. Or to say that it is substantially correct?

A. I have no hesitancy in saying that this map is substantially correct.

Q. As based upon the information——

A. Based upon personal observation, studies of other maps made by the United States Government, maps that have been made by individuals and corporations, and by travels through the Adirondack region, and with maps in my pocket, and with maps continually consulted, to find out where I was, and how far I had traveled, this area is not far out of the way.

Q. And you have not compared this with any of those maps?

A. Not directly compared it; not inch by inch.

Q. Have you compared it at all? Have you laid this map down and compared it, since you first saw it, with any of these maps?

A. I have compared it with my knowledge of that region, and I say that, compared with that knowledge, this map is essentially correct.

Q. The question is, Professor Nason, whether or not you have actually compared this map with any of the other maps to which you have referred. If so, please state when you did it.

A. Do you mean, have I taken this map, and taken the United States Government maps and laid them down side by side and compared them in that way? Is that what you mean?

Q. I do not mean necessarily that you laid them down side by side, but I mean in the fair acceptation of the term have you actually compared this map with other maps, having this map with the other maps when you made the comparison? If so, when did you do it?

A. I should answer the question by saying that essentially I have compared this map with other maps.

Q. What do you mean by "essentially"?

A. I mean "essentially" that I have the map of the Adirondack mining region very thoroughly in mind. I did not get that from a survey, but I got it from other maps that I

considered authentic, and when I looked over this map I compared the general area of this map with my knowledge that I have gained from personal experience and from other maps, and I should say it is an essential comparison.

Q. When you say you have essentially made a comparison you do not mean that you have compared this map with others, having the maps together at the time of making the comparison, but you have compared this map with the knowledge that you carried in your mind of other maps; is that correct or not? If not, please state what is correct.

A. I do not know whether that is correct.

Q. Then please state how you made this comparison, if you say you made it.

A. I have told you how I made that comparison. I wanted to get at the exact meaning of your question. You asked me if I had compared this map with other maps of that region. If you ask me if I put the map of the Adirondack region side by side with this map and compared it inch by inch, I tell you I did not. I will restate that I have studied the maps of the Adirondack region repeatedly and have traveled through that region repeatedly with these maps right in my pocket, the actual maps, until I got a pretty fair idea of the geology of that region, and then I compared this map with my general knowledge of it, and it seems to check out very closely.

Q. Let me see if I have got you right. You have compared this map with the knowledge that you carry in your mind, derived from other maps, is that correct?

A. That would be approximately correct.

Q. And that is the only kind of comparison that you have made?

A. It is the only comparison I have ever made with this map.

Q. What is the longest distance east and west, as shown on this map, of the iron-bearing region as indicated here in dark lines in the Adirondack region?

A. I cannot tell you offhand.

Q. What is the greatest distance from north to south?

A. I cannot tell you offhand.

Q. What is the average distance from east to west?

A. I cannot tell you offhand.

Q. What is the average distance from north to south?

A. I cannot tell you offhand.

Q. There is a portion of this that is designated by parallel lines, and a portion of it designated by lines running both ways, making squares. Does that indicate any difference in the character of the ore?

A. I would like to see that map before I answer that question.

Q. You remember the map, don't you?

A. I remember something about it. I know there are two kinds of rocks two distinct classes of rocks in the Adirondack region, one of which is known as gabbro, and the other known as magnetic iron-bearing gneisses, and the magnetic gneisses are largely in excess of the gabbros.

Q. Can you say, without looking at the map, what distance would be indicated by the character of the lines that I have described to you?

A. There is roughly a pear-shaped area in there that is darker than the rest, which reaches back from Lake Champlain and swells out in a kind of round ball. Those are what are known as gabbros.

Q. Is all that region ore-bearing?

A. The gabbros have iron ores in them, but I have not classed them with the ores of which I have been speaking.

Q. What portion of this map which is designated by those lines outside of the gabbro district do you include in your estimate?

A. What portion?

Q. Yes; in your estimate of the ores in the Adirondack region?

A. I have given those by districts, and I have also stated that the area that had been pretty fairly explored and worked was about ten per cent. of the entire region, that is, the iron-bearing region.

Q. Did you attribute anything in your estimate beyond ten per cent.?

A. I beg your pardon.

Q. I say did your estimate include anything beyond the ten per cent. region that you spoke of?

A. Ten per cent. of the area.

Q. Did it include any beyond the ten per cent. of area?

A. No, it did not.

Q. Coming down to New York, what portion of the territory included in this map as ore bearing have you yourself made exploration in, if any, in the State of New York?

A. In the State of New York; I cannot give you the counties, but I can give you the names of the mines.

Q. That you yourself made explorations in?

A. Yes.

Q. What are the names?

A. One was the Theal or Croton; another is the Tillie Foster mine.

Q. When were those explorations made by you?

A. Well the Tillie Foster I was acquainted with twenty years ago, and the Theal mine or Croton mine, that was done four or five years ago, I cannot tell you exactly.

Q. Is that all the personal experience in the way of exploration that you have had in the State of New York? I mean, of these ores that cross over from New Jersey?

A. No.

Q. What else have you had?

A. I am speaking now of the detailed, careful study that I have made. I have been over that region repeatedly.

Q. I am trying to get, Professor, in this region near the Hudson; you understand I am talking about that region?

A. That is right.

Q. In what proportion of the ore-bearing territory in that country have you yourself personally made explorations, and state the character of those explorations and when you made them.

A. I want to put in one other mine, because that is in southeastern New York. That is the Sterling Lake mine. The Sterling Lake mine and the Theal mine and the Tillie Foster mine were mines that I examined especially and was paid for the examination, with the idea of suggesting methods of exploration, for the purpose of estimating the tonnage, and the

value of it, so that that would be a very much more careful examination than the rest of the explorations in southeastern New York. While I was connected with the Geological Survey of New Jersey—that belt in southeastern New York is continuous, or an uninterrupted continuation of the New Jersey, and as a geologist in New Jersey I wanted to get all the information I could, and I followed that belt from New Jersey over into New York State.

Q. What explorations did you make in the way of seeing drills or entries or shafts either under your personal observation or that you did yourself?

A. I made no diamond drill explorations except one, and that was twenty years ago at the Tillie Foster.

Q. How much of this ore have you attributed to that region in the southeastern part of New York?

A. Well, about 60,000,000 tons.

Q. How much of that territory did you actually examine?

A. I have been over that entire area from the New Jersey line as far east as the Theal or Croton mine near Brewster, New York.

Q. How many places did you have access personally to where the ore was either being tested by diamond drills or being operated?

A. Three.

Q. Now, one was the Sterling Lake?

A. One was the Sterling Lake.

Q. And I forget the other two.

A. The Tillie Foster.

Q. The Theal?

A. Or Croton mines.

Q. What was the extent of the operation of each of these mines? Please name them in order.

A. The Sterling Lake, I do not remember the output. They were in operation then, but I do not remember the daily output or the yearly output. The Tillie Foster, I do not remember the daily output at the time they were operating, and the Theal mine or Croton mine was not being operated at the time I was there.

Q. What proportion did those represent of that entire territory?

A. Oh that would be a pretty hard question to answer. From the New Jersey border clear through to the Hudson River there are a dozen or more different mine openings that have been operated at one time or another. Then there are several from the Hudson River over to the Theal mine.

Q. But I am asking you now with respect to these three mines that you say you yourself examined; what proportion was that of the whole ore-bearing district that you have estimated in New York as being capable of producing this 60,000,000 tons?

A. Why, I could not give you the proportion covered by the companies who own these mines, nor the actual area of the workings—outcrops.

Q. You have estimated the entire area, have you not, though, to a certain depth?

A. I have.

Q. Upon the assumption that it will be uniform?

A. Yes.

Q. These New Jersey ores you say have been shipped since sometime in 1700?

A. Yes.

Q. And the Adirondack ores have been shipped and used how long?

A. That I could not tell. Probably they were operated almost as soon as—

Q. (Interposing) The Revolution, I understood you to say.

A. Yes, the Revolutionary War, more or less.

Q. How long have you known this territory and the general character of the ores there, and their extent, to which you have testified here?

A. Why, purely as a professional geologist, I have known those ores since 1890. In a very careful valuation that I made of property in the Adirondacks, these estimates that I have given you here were made in 1910.

Q. In 1910?

A. Yes.

Q. And you have known about these ores as early as 1890?

A. As early as 1890. Since 1907 I have acted in a consulting capacity for one company up there, more or less.

Q. Well, in 1890 did you know the general extent and character of these ores?

A. Oh, yes.

Q. It was a matter of common knowledge, was it, to scientific men?

A. Yes; it was a little more than a matter of common knowledge.

Q. Yes, and generally known to people who are posted in the iron business?

A. Yes, sir.

Q. Now, your estimates, I believe, cover all the New York ore-bearing regions, do they not?

MR. REED: He has testified, in answer to your own question, that they only include ten per cent. in the Adirondacks.

MR. DICKINSON: Well, strike that out.

By MR. DICKINSON:

Q. Your knowledge as a geologist covers generally, does it, the whole New York region?

A. Generally, yes.

Q. And New Jersey?

A. And New Jersey.

Q. And Pennsylvania?

A. No, sir.

Q. Not Pennsylvania?

A. No, sir.

Q. Have you given any estimates on Pennsylvania at all?

A. I have not.

Q. Do you know approximately what was the production of ore in the State of New Jersey for the year 1905?

A. I do not.

Q. Do you know approximately what was the production of iron ore in the State of New York for the same year?

A. I do not.

Q. Were they not very small—

A. (Interposing) I could not tell you.

Q. (Continuing) Wait a moment. I had not quite finished—in percentage, as compared with the production for that year of the Lake Superior ores?

A. I could not tell you anything about that.

Q. Have you no information or knowledge which would enable you to give approximate figures on that?

A. No, sir.

Q. Have you any idea at all in your mind of the difference between the output of the Lake Superior region and the State of New York or the State of New Jersey for the year 1905?

A. No, sir.

Q. Have you in your mind any knowledge or information which would enable you to make any statement or estimate of the comparative production of iron ore in New York and New Jersey with the total production of the Lake Superior iron ore for any year subsequent to 1905?

A. No, sir.

Q. Do you know whether or not since 1905 in any year, the amount of iron ore produced either by New York or New Jersey has been as much as one-twentieth of the iron ore produced for that same year by the Lake Superior region?

A. These figures—statistics from year to year of iron ore production, I never try to carry in my mind at all. They are matters of record, and if I need them I refer to them.

Q. I am not asking you now as to particular figures.

A. I understood you were asking for 1905.

Q. That is, not to carry them in your mind; but I am now asking your general knowledge and information as to the comparative amounts of the output and the effect of the output of these several regions upon the whole iron industry for those years. Have you any information or knowledge which gives you an approximate idea of the comparative or relative importance of these two states as compared with the Lake Superior region?

A. I think "importance" is a rather ambiguous term.

Q. I will try to make it clear.

MR. REED: Let him finish.

THE WITNESS: There are so many elements that enter into

a question of that kind that it is very difficult to answer off-hand and give a concise, sharp answer, and have it mean the exact truth.

By Mr. Dickinson:

Q. Well, I am not asking you now for a concise, sharp answer.

A. I understood that when you asked me about the production for 1905.

Q. I am not asking you now about 1905.

A. But you did.

Q. We have passed from that.

A. Yes.

Q. And now I am asking you if from your general knowledge you know the relative importance, approximately, from the standpoint of production of iron ore, of either of these states as compared with the Lake Superior region for any year from 1905 down to 1912?

A. When you say "importance," do you mean tonnages?

Q. Yes, I mean tonnages.

A. Why it goes without saying that the Lake Superior district has produced a far larger tonnage than any of these eastern mines have produced.

Q. Have these eastern mines, from the year 1905, down to the year 1912, increased their output in the same proportion, approximately—not actually—that the Lake Superior region has increased its output?

A. Since 1905, or since 1891, I have had nothing specially to do with the output of iron ores of New Jersey, in general. It is just simply a matter of statistics. I look them through once in a while, as a matter of curiosity, or as I may need them, but in New York State in one district from 1909—sometime about that—up to 1910, I do know that in one place the production has been—well, I should say pretty nearly quintupled.

Q. You know some places where it has not quintupled, do you not, in the time you spoke of during which you spoke of its quintupling?

A. It has not increased in the same relative proportion, but the output is larger.

Q. You say you have in mind some particular places. Take the entire State of New York: Has that increased its output materially and constantly from year to year from 1905 to 1912?

A. That is a matter of statistics. If I wanted that I should refer to a book; but I do not carry those figures in my mind.

Q. And you could not say whether or not it has materially increased or not, to take the whole State?

A. If you want my impression, I should say that it had materially increased.

Q. Would you say that it had increased from 1905 down to 1912, as much as 100 per cent.?

A. You are asking me about definite figures again.

Q. Approximately 100 per cent.?

A. I would not want to say.

Q. Do you know whether or not the Lake Superior output in that time has increased in a greater ratio than has increased the output from the State of New York or the State of New Jersey?

A. I have not any——

MR. REED: Excuse me, Judge; your own exhibits show the output has decreased.

MR. DICKINSON: I object, when I am asking a question on cross examination for the purpose of testing the witness, to counsel making statements.

MR. COLTON: Which are not correct. It is just the reverse.

MR. REED: If there is any doubt about it, I call attention to page 2583 of your Volume XII, showing 33,000,000 tons in 1905 and 32,000,000 in 1911. I knew that you did not want to mislead the witness, Judge.

MR. COLTON: He said 1912, I think.

MR. REED: I did not understand the Judge to say that.

MR. DICKINSON: Certainly; from 1905 to 1912. Certainly I said that.

MR. REED: I had not heard 1912 mentioned.

(By request of Mr. Dickinson, the stenographer repeated the preceding question referred to, as follows:)

"Q. Would you say that it had increased from 1905 down to 1912 as much as 100 per cent?"

MR. DICKINSON: I think if you will examine the exhibits, you will find out that you are mistaken.

MR. REED: Have you any exhibits showing the production for 1912?

MR. DICKINSON: Yes.

MR. REED: Did you offer it in evidence?

MR. COLTON: It has not been offered yet.

MR. REED: I cannot examine exhibits you have not yet offered in evidence.

MR. DICKINSON: But you spoke of our exhibits.

MR. REED: Yes.

MR. DICKINSON: I do not think this interruption tends to clarify the testimony of the witness or to facilitate the progress of the case.

MR. REED: I knew you did not want to mislead the witness, Judge; that is all.

MR. DICKINSON: I had made no statement. The witness was making a statement. I had made no reference to any exhibit.

(At the request of Mr. Dickinson the stenographer repeated the last question, as follows:)

"Q. Do you know whether or not the Lake Superior output in that time has increased in a greater ratio than has increased the output from the State of New York or the State of New Jersey?"

THE WITNESS: My answer is that I know practically nothing about the Lake Superior region or the Lake region at all.

By MR. DICKINSON:

Q. Professor Nason, do you not know, as a matter of fact, that the amount of ore annually produced since 1905 down to 1912 from New York and New Jersey, taken together, constitutes a very small percentage of all the ore produced in the United States for those several years?

A. Yes; I do know that. I was not talking about that.

My testimony, as I understood, was as to the ores that were available here in these eastern states now.

Q. Do you not know that the Lake Superior ores constitute, in point of production, from 75 to 80 per cent. of the ores used annually in the United States?

A. Those are matters of statistics. I could not say offhand.

Q. I am just asking whether you know anything about it one way or the other.

A. I know that the Lake ores are relatively very much greater in production than the eastern seaboard ores.

Q. Do you not know that the Lake ores have been, since 1901, the basis mainly of the steel industry of the United States down to 1912?

A. I would not want to say that as a matter of positive knowledge, but as a matter of understanding, why, yes, I should not have any hesitancy in saying that.

Q. You spoke, I believe, of published tables which do give these figures. There are such published tables, are there?

A. What figures?

Q. The figures of the amount of ore produced by various states in the various ores.

A. Yes.

Q. Are you acquainted with the tables that are published in Washington under the title of "Production of Iron Ore, Pig Iron and Steel in 1912, by Ernest F. Burchard"?

A. Oh, I have seen them from time to time.

Q. Are those tables regarded and accepted as reliable as statistical tables?

A. I never checked them up, and have no means of checking them up.

Q. I did not ask you that, Professor.

A. You asked me if they were reliable.

Q. No; I ask if they are received and regarded as reliable?

A. They are by me. I would not want to state concerning anyone else.

Q. They are by you, as a scientist?

A. Yes.

MR. DICKINSON: We produce a pamphlet entitled "Department of the Interior, U. S. Geological Survey, George Otis Smith, Director. The Production of Iron Ore, Pig Iron, and Steel in 1912. By Ernest F. Burchard. Advance Chapter from Mineral Resources of the United States Calendar Year 1912. Washington, Government Printing Office, 1913," and offer in evidence from said pamphlet the following:

The tables appearing on pages 7 and 8 and giving the "Rank of States in mined and in marketed production of iron ore, 1911 and 1912," together with introductory remarks on page 6 beginning with "Production of Iron Ore by States" and ending with the words "the percentage of increase or decrease in the various States."

The tables appearing on pages 10 and 11 of said pamphlet and showing the iron ore mined in the United States in 1911 and 1912 by States and varieties, and also by districts and varieties, together with the introductory and explanatory words beginning on page 9 with the words "Production of Iron Ore by Varieties by States and Mining Districts" through the words on page 11, "The brown-ore mines near Russellville, Ala., and in west central Tennessee are not included in either district."

The table on page 18 of said pamphlet entitled "Apparent consumption of iron ore in the United States, 1889-1912, in long tons," together with the introductory and explanatory words on page 17, beginning with the words "Apparent Annual Iron-Ore Consumption" and ending with the words "less the exports gives the apparent consumption."

Also the tables on pages 19 and 20 of said pamphlet entitled "Production of iron ore (quantity mined) in the Lake Superior region, 1911-1912, by ranges, in long tons," together with the introductory and explanatory words beginning on page 18, "Iron-Ore Industry in the Lake Superior District," down through the final figures of the table on page 20, "580,351,032."

Also the tables on pages 24, 25, 26 and 27, showing the imports and exports of ore for various years, together with the introductory and explanatory remarks beginning on page 24 with the word "Imports" and ending on page 27 with the

words "Of this quantity, 12,691 tons were sent to foreign ports."

MR. REED: We object to this first on the ground that only a part of this pamphlet is offered instead of the pamphlet as a whole; second, that it appears to be a self-serving statement published by the complainant in this case after the institution of these proceedings.

(The portions of the pamphlet referred to were thereupon marked "Government Exhibit (Nason) No. 439, October 8, 1913," and will be found in the volume of exhibits.)

By MR. DICKINSON:

Q. You appear as an expert in this case, employed by the defendant, do you?

A. I rather object to the term expert. I am supposed to have considerable knowledge of the magnetic iron ore resources of New Jersey and southeastern New York and in the Adirondack region, and it is in that capacity that I have been employed.

MR. DICKINSON: We will not insist upon the expert feature of it.

MR. REED: Is that all, Judge?

MR. DICKINSON: Yes.

By MR. REED:

Q. Have you any interest in the United States Steel Corporation?

A. In what way.

Q. As a stockholder?

A. Yes, I have.

Q. To a considerable amount?

A. Not a very great amount.

Q. How long have you had it?

A. As I have saved up from time to time I have put it in; the first stock I acquired I think was in 1903 or 1904. I would just as soon tell you the extent of my holdings; they are one hundred shares of preferred.

Q. Have you any agreement with the Corporation to pay you any specified amount for your time that you have spent in testifying here?

A. Nothing was said to me about it and I never said anything about it.

Q. Have you any regular retainer from the Steel Corporation to serve it in any capacity?

A. I have not, and I never have had.

Q. You were simply notified that we desired your testimony?

A. Yes.

Q. And you came in response to that request?

A. Yes.

Q. I want to ask you whether any of the ores included in that district which is shaded in Exhibit 106, in the Adirondack region, are included in your estimate?

A. In this particular area shaded of titaniferous magnetite, no.

Q. You have not included any tonnage in this estimate?

A. I have not included any tonnage in this estimate.

Q. Have you included any of the Clinton ores which lie in the western part of New York?

A. I have not.

Q. Have you included any varieties of ore other than those which are now being mined?

A. Nothing except magnetites.

Q. And marketed?

A. Nothing except magnetites.

Q. Where do those magnetites lie?

A. These magnetites lie in the Adirondack region, in southeastern New York and in New Jersey.

Q. And those are the magnetites that are now being marketed?

A. They are the magnetites that are now being marketed.

Q. As a matter of fact, Mr. Nason, these titaniferous ores of the Adirondacks are being worked to some extent now, are they?

A. I do not know how extensively they are being worked.

Q. Developments are in progress at least?

A. Oh, yes; they have been for a great many years, quite a number of years.

Q. The Clinton ores of which you spoke are being worked in spots, are they not?

A. Yes.

Q. But you have not included any of those at all?

A. None of those at all.

By Mr. Dickinson:

Q. You have stated that while you have not had any specific agreement, you understand that you were employed in this matter and expected compensation?

A. I was called as a witness and expect to be paid the same as any other professional man.

By Mr. Reed:

Q. You did not think we were going to ask you to give up all this time from your regular work, and bear the expense of coming here and staying in New York, and not recompense you for that, did you?

A. I did not.

CHARLES AUSTIN BUCK

was called as a witness on behalf of the defendants, and being first duly sworn, testified as follows:

DIRECT EXAMINATION

By Mr. Reed:

Q. Where do you live?

A. In South Bethlehem, Pennsylvania.

Q. What is your occupation?

A. I have been a steel manufacturer; I am a chemist by profession, and metallurgist.

Q. How long have you been in the steel business?

A. Twenty-six years.

Q. Where did you start?

A. At South Bethlehem, with the Bethlehem Steel Company. It was then the Bethlehem Iron Company.

Q. Have you been with the Bethlehem Iron Company and its successor the Bethlehem Steel Company, for the last 26 years?

A. I have been with the Bethlehem Iron Company and the Bethlehem Steel Company ever since I came out of college, since I have gone to work.

Q. What is your present position in the company, the Bethlehem Steel Company?

A. Vice-president, one of its vice-presidents.

Q. What other position have you occupied?

A. Chemist, metallurgist, assistant chemist, general superintendent, and now vice-president.

Q. You have had experience in blast furnace operations also, have you not?

A. I have been superintendent of blast furnaces, too, I beg your pardon.

Q. You still have general charge of blast furnace operations of the Bethlehem Steel Company?

A. In a general way, and the policies.

Q. Are you familiar with the sources from which that corporation secures its iron ores?

A. I am familiar with the sources of the ore during that period.

Q. For the whole of the 26 years?

A. The whole of the 26 years, yes.

Q. You, yourself, as chemist for them have analyzed some of those ores?

A. I have analyzed a great many of them, yes.

Q. And watched their use and values in the furnace?

A. I have studied their use and their relative values in blast furnaces.

Q. From what sources does the Bethlehem Steel Company at the present time obtain its ore supply?

A. It controls its own ore supply from Cuba, primarily; that is, probably its largest tonnage of ore comes from there. There is an equal tonnage of ore that is derived from Sweden, and there is a small percentage of ore that comes from the Lakes, and another large percentage of ore comes from the Adirondacks and New Jersey.

Q. Where are the furnaces of the Bethlehem Steel Company located?

A. Located at South Bethlehem, Pennsylvania.

Q. How many furnaces has that company?

A. The company has six furnaces built and in operation, and one more building. It will have seven furnaces in the course of 60 days. There are six in operation now.

Q. Are they large sized furnaces?

A. Four of the furnaces are large, and one is a small furnace. The other is being rebuilt into a large furnace, so that there are five large furnaces and one small one, and one large one being built, and nearing completion.

Q. What is your present annual consumption of iron ore?

A. About a million and a quarter tons of iron ore, or a million and a half.

Q. From all these different mines?

A. From these different districts, yes.

Q. Does your company own or control any iron ore deposits in the Adirondack region?

A. It owns one small property in the Adirondack region known as the Cheever Iron mine.

Q. From what properties is its Adirondack ore supply derived?

A. It is purchased from Witherbee-Sherman & Company, from the Adirondacks at Mineville.

Q. Do you take some from your own Cheever mine?

A. We take some from the Cheever mine.

Q. But the greater part of it comes from Witherbee-Sherman & Company?

A. The greater part comes from Witherbee-Sherman & Company's mines.

Q. Is that pretty good ore?

A. Pretty good ore.

Q. How does it run in iron?

A. From 60 to 65 per cent. in iron, depending on whether it is crude or concentrated.

Q. Do you make good iron from it in the furnaces?

A. We have used it for a good many years, and I think we have the reputation of making pretty good steel.

Q. Do you use it in the open hearth process?

A. Open hearth process entirely.

Q. Do you operate any Bessemer converters at Bethlehem?

A. Only as an intermediate process, not in making directly Bessemer steel.

Q. You do not use the Bessemer process?

A. The Bessemer process as it is understood in the steel trade, no, sir.

Q. I understand there is a process known as the duplex process?

A. The duplex process, yes, we use that at times.

Q. Now, if I correctly understand it, the Bessemer converters are used first in order to prepare the material for use in the open hearth furnace, to reduce the time necessary to spend on each heat in the open hearth furnace?

A. That is the object of the process. The object is really to eliminate carbon and silicon quickly from the pig iron, which can be done in about ten minutes, as compared with maybe four hours in the open hearth process.

Q. It is simply a preparatory treatment for the open hearth process?

A. It has been looked upon as a cheaper means of carrying on the two processes together.

Q. Practically it produces open hearth steel, by that process, does it?

A. Yes; it is only an economical step in the operation.

Q. And Bessemer ore and Bessemer pig iron are not required by this duplex process?

A. No, sir; any ordinary grade of pig iron can be employed.

Q. Now, does your company own any ore or ore reserves in New Jersey?

A. We do not own any ore reserves in New Jersey. We have a long term contract by which we take all the iron ore from the Sterling Lake mines. That is not located in New Jersey. It is on the border line between New York and New Jersey. We are not receiving any ores from New Jersey at the present time.

Q. That is a mine that is just over the New York line?

A. It is just over the New Jersey line.

Q. About what is your annual supply from that mine, or from that New Jersey-New York district?

A. The tonnage of that district has been from about six to ten thousand tons a month.

Q. Is the ore from that mine good ore?

A. Yes.

Q. Do you make good iron from it?

A. We make good iron from it; we have used it for many years.

Q. You use it regularly in your mix?

A. Regularly, for a great many years.

Q. About what tonnage do you receive annually from Cuba, Mr. Buck?

A. About 400,000 tons.

Q. Is that of the north or the south shore ores?

A. That is the south shore ore; what is known as the hard ore from the south coast.

Q. And what kind of ore is that?

A. That is a Bessemer, rich ore in iron; about 60 per cent. iron and within the Bessemer limits of phosphorus.

Q. Is it what is known as a wet ore?

A. It is known as a dry ore.

Q. It is a hard ore, is it?

A. It is a hard ore; hard semi-magnetic ore.

Q. About 60 per cent. iron?

A. Yes.

Q. And of the Bessemer quality?

A. Of the Bessemer quality.

Q. Are you receiving any of the north shore ores from Cuba?

A. We are not.

Q. They are known as limonites, are they not?

A. Yes.

Q. Does your company own any of the limonites there?

A. We own large tonnages on the north coast of Cuba.

Q. Have you had any need for it as yet?

A. No, we have not.

Q. You are holding them in reserve?

A. Yes.

Q. About what tonnage, if you feel free to state it, of Cuban ore does your company own?

A. Our company figures they own about 200,000,000 tons on the north coast of Cuba, and a small tonnage—probably four or five million tons—on the south coast; 200,000,000 tons on the north coast.

Q. Is that tonnage on the north coast expressed in tonnage of natural ore? Wet, that is?

A. That is the wet, natural ore as it occurs.

Q. About 250,000,000 tons, did you say?

A. Well, about 200,000,000 tons.

Q. You have been there on the north coast of Cuba, have you?

A. I have not been on the north coast of Cuba; no, sir.

Q. You have not examined the deposits of other companies there?

A. No, not on the north coast. I am familiar with the south coast ores.

Q. What other companies own south coast Cuban ores?

A. The Pennsylvania Steel Company.

Q. And about what tonnage have they on the south coast?

A. I would not like to make that statement.

MR. DICKINSON: What is that?

THE WITNESS: I would not like to say how much.

By MR. REED:

Q. You have not examined them sufficiently?

A. No, I have not examined them sufficiently, but I know it to be a large tonnage; that is all.

Q. Have you examined their north coast ores?

A. No, sir.

Q. About what tonnage annually is your company receiving from Sweden?

A. About 400,000 tons a year.

Q. What kind of ore is that, Mr. Buck?

A. That is a very rich magnetite ore, carrying about 66 to 67 per cent. of iron, and is quite suitable for the open hearth process.

Q. Of the Bessemer quality?

A. Non-Bessemer quality.

Q. Is that good ore?

A. Excellent ore.

Q. From what special mine do you receive that?

A. From what is known as the Kiiruna mines.

Q. That is the mine known as the Kiirunavarra?

A. Yes.

Q. In the north of Sweden?

A. Yes, sir.

Q. How many years have you been getting that ore, Mr. Buck?

A. This is the third year.

Q. Have you a contract calling for the delivery of such ore over a period of years?

A. Over a period of years, yes, sir.

Q. What is the minimum iron content of the ore which may be delivered to you under that contract?

A. Sixty-five per cent.

Q. That contract has some years yet to run, has it?

A. It has a number of years to run.

Q. Has the Bethlehem Steel Company any reserves in the Lake Superior district?

A. No, sir.

Q. About what tonnage of Lake Superior ores have you been getting?

A. We are getting about 100,000 tons of Lake Superior ores a year.

Q. You buy those, I suppose?

A. We buy them in the open market; yes, sir.

Q. Have you any reserve tonnages in any other foreign countries than Cuba?

A. We have in Chile. We have recently acquired a large tract of land in Chile.

Q. In what part of Chile?

A. Near Coquimbo, about 30 degrees latitude south.

Q. Your company controls those deposits now?

A. Yes; our company controls those deposits by lease.

Q. And is it your expectation to use those in the United States?

A. We expect to use large tonnages of that ore in the United States.

Q. At which furnaces?

A. At our furnaces at South Bethlehem.

Q. How will that ore be brought to the United States?

A. It will be brought from near Coquimbo, up the west coast of South America, through the Canal, to Philadelphia or New York.

Q. Are you already preparing those mines for shipment?

A. We are laying out an equipment now to take care of about a million and a half tons of ore a year—installing such equipment.

Q. Have you made any preparations for your vessel service?

A. We are just about preparing to let contracts for vessels.

Q. You plan to operate your own vessels, do you?

A. Yes, to operate our own vessels from South America.

Q. I want you to tell us a little bit about these Chilean deposits. How far do they lie from the seacoast?

A. In this particular property there are large tonnages of ore occurring about five to eight miles off the coast; quite a number of deposits; half a dozen well known deposits. The principal one of these deposits is the one that we have just acquired, which is known as the Tofo mines.

Q. The Tofo mines?

A. Yes.

Q. How far is that from the seacoast?

A. That is about four miles from the seacoast.

Q. Have you a large quantity of it?

A. There is a large tonnage of ore exposed in these mines, uncovered. We estimate that there are 60,000,000 tons of ore in sight, without any prospecting work, practically, being done on the property.

Q. Do you mean without any stripping at all?

A. Without any stripping or the removal of any refuse or gangue or anything.

Q. 60,000,000 tons on the surface?

A. Sticking out of the ground, on a conical hill, exposed.

Q. Unconcealed by any earth?

A. Unconcealed by anything of a geological nature at all.

Q. Does that lie much above sea level?

A. It lies about 2,500 feet above sea level.

Q. That is at the apex of the mountain?

A. At the apex of the mountain; yes, sir.

Q. And in the valley that lies below this hill of ore, what is the level above the sea?

A. The mountain itself is about 1,200 feet; from the valleys about the mountain to the top of the mountain is 1,200 feet, and we believe there are 150,000,000 tons of ore on the property, from a reasonable geological estimate, without much speculation.

Q. Now, how far down below the valley level do you go in estimating 150,000,000 tons?

A. We do not go more than about half way down the mountainside to estimate on 100,000,000 to 150,000,000 tons of ore.

Q. Do you mean to say, Mr. Buck, that you do not even include the ore at the level of the valley?

A. No, sir.

Q. In that estimate?

A. No, we do not include that.

Q. Have you any idea of what the tonnage would be if you took the ore that just goes down as far as the level of the valley?

A. Well, it would be undoubtedly three or four times as much as we estimate on. That would be quite possible, I think.

Q. As iron mines go, is this going to be expensive to mine?

A. No, it is going to be very economical to mine, because there is no stripping and no high cost of transportation. It will be a very cheap mine to operate.

Q. Just an open quarry, is it not, practically?

A. Yes, just the same as a limestone quarry in operation; purely a quarrying operation.

Q. There will be some help from gravity?

A. Entirely a gravity operation. It will not cost anything to transport the ore from the mines to the bay, and in view of being able to put in a transporting system from which there will be sufficient power created to take the cars back, that will not cost anything.

Q. How about the quality of this ore, Mr. Buck?

A. I do not know of any ore the equal of the quality of this ore in the United States or elsewhere.

Q. How will it run in iron content?

A. The average analysis of about 300 samples we took was 68.5 per cent. of iron; 70 to 72 per cent. of the ore, theoretically, is hematite or magnetite, so it carries about four to five per cent. of foreign material. Ninety-five per cent. of it is magnetite oxide or hematite oxide.

Q. It is partly magnetite and partly hematite?

A. Partly hematite and partly magnetite.

Q. How does it run in phosphorus?

A. It is a Bessemer ore. It will run about .035 in phosphorus on the average; some of it very much lower than that. A large percentage of it will be low phosphorus ore, as low as .015 in phosphorus; probably 50 per cent. of it.

Q. That is away below the Bessemer limit, is it not?

A. Yes, sir.

Q. Is there any ore as good as that to be found in the United States?

A. I do not know of any.

Q. Is there any ore as good as that in Lake Superior?

A. There are small tonnages up there, but not as rich as that—small tonnages of low phosphorus ore, but there is no tonnage carrying that percentage of iron that is known today.

Q. How about the structure of these Chilean ore bodies?

A. It is a hard, dry ore, and requires crushing for smelting.

Q. It is not a powdery ore, like the Mesabi ore?

A. No; it is a lump ore, and naturally will yield well, will give a very high yield in furnaces.

Q. And that is what the furnace manager wants?

A. That is what the furnace manager likes to have, so that he does not lose any.

Q. Is there any ore in the Lake Superior region that you know of, that, from the standard of metallic content and phosphorus analysis, and texture, is comparable with this Chilean ore?

A. I do not know of any.

Q. Is that the only deposit of such ore in Chile?

A. No; I know of a number of such deposits in Chile; not probably as large as this, but there are a great many different deposits that have been brought to light in the last two years, mountains of iron ore of this character, at varying distances from the coast.

Q. Have they all been bought up by operating furnace companies?

A. Several of them have.

Q. Are there some of them that still can be purchased?

A. I think so; I think there are still some that can be purchased; yes, sir.

Q. Has the United States Steel Corporation any of that Chilean ore that you know of?

A. Not that I know of; no sir.

Q. Have you figured on the cost of mining this ore and bringing it to Bethlehem?

A. Yes, sir.

Q. Have you figured on the cost expressed in unit terms?

A. Yes, sir.

Q. That is, the cost per unit of iron?

A. We have.

Q. Have you figured on the cost of bringing Lake Superior ore to Bethlehem on both of those bases?

A. We have naturally compared the two regions in acquiring a supply of ore.

Q. How do they compare?

A. We estimate that we can deliver ore very much cheaper into Bethlehem from the foreign ore beds than we can any Lake ore.

That is, taking into consideration the quality of the ore and the transportation, mining, and everything.

Q. And that is disregarding the original cost of the purchase of the ore lands, is it?

A. Yes.

Q. That is just mining cost and transportation?

A. Purely cost of mining and transportation and the quality of the ore that you would receive.

Q. So that if the ores cost the same per ton in the ground, the Chilean ore would have the advantage, would it?

A. Yes.

Q. Where did the Bethlehem Steel Company get its ores from when you first knew it?

A. Its ores largely came from Spain when we first started in the business.

Q. Were you there when the company began operations?

A. No; I was not with the Bethlehem Steel Company when it began operations.

Q. How long had it been running at the time you got to it?

A. The steel company began operations, I think, in about 1870. I started in with the steel company in 1888.

Q. You knew the history of the company, did you?

A. I did.

Q. Where was its original ore supply obtained from?

A. The original supply of ores came largely from Spain. Considerable tonnage of ore came from the Island of Elba. Some of it came from the Cumberland district in England; and, in about 1883, they began operations in Cuba.

Q. Then this idea of using foreign ores is not an idea that has come up in the last two or three years?

A. Oh, no; the Bethlehem Company has always looked upon its foreign ore supply and its local ores in New York and New Jersey as its natural supply of ore as a steel making operation.

Q. Mr. Buck, you gave us an estimate of the tonnage of north coast ores in Cuba that your company owned?

A. Yes.

Q. Have you, yourself, ever made an examination of those?

A. No, sir; I have not. I am not personally familiar with those.

Q. That is just your impression?

A. That is my impression. I am not personally familiar with those; no, sir.

Q. Who would be better able to give us information with regard to them?

A. Mr. Snyder, the vice-president of our company, who has had personal contact with them.

Q. Mr. Snyder, the other vice-president?

A. Mr. Snyder, the other vice-president, who has had personal contact with those properties.

CROSS EXAMINATION.

By Mr. Dickinson:

Q. Mr. Buck, have you been to Cuba and examined the ore there?

A. Oh, yes, sir.

Q. You just spoke of Mr. Snyder's being more familiar with them; in what respect?

A. With the north coast ores. There was an interval of time, Judge, when I became general superintendent of the company, and during that interval of time Mr. Snyder took hold of the ore properties in Cuba, and during that period these north coast ores were acquired; so that he is specifically better informed in regard to them than I am.

Q. What personal contact have you had with the north coast ores?

A. I have had none, sir.

Q. None at all?

A. No, sir.

Q. There is where the bulk of your ores are, is it not?

A. The bulk of our ores; yes, sir.

Mr. Reed: The bulk of your ores?

The Witness: Of our north coast ores in Cuba. That is where our north coast ores are that we acquired.

By Mr. Dickinson:

Q. But you spoke of the north coast and the south coast.

A. That is of the Cuban ores I am speaking now.

Q. I understand.

A. But you said in general ores. You did not say specifically, Judge.

Q. I am speaking of the Cuban ore.

A. But you did not say so, Judge.

Q. I was referring to Cuba.

A. That is the reason I corrected you.

Q. You have some on the north coast and some on the south coast?

A. Yes.

Q. How much on the south?

A. About five million tons on the south coast.

Q. And about 200,000,000 on the north coast?

A. Probably.

Q. So that the bulk of your Cuban ores is on the north coast?

A. Yes.

Q. And that you are not, yourself, personally familiar with?

A. No, sir.

Q. Never having been on the ground and examined them?

A. No, sir.

Q. What you have stated in regard to that, then, is based on information given you by others?

A. Yes, sir.

Mr. Dickinson: We object to that statement as being hearsay and incompetent.

By Mr. Dickinson:

Q. When were you last in Chile?

A. I returned from Chile about four weeks ago.

Q. When did you first go there?

A. Last year, about July, 1912.

Q. When did you first know about these Chilean ores?

A. About a year or a year and a half ago.

Q. So far as you know, were they generally known, their character and extent, before that time?

A. They were not generally known; no, sir.

Q. You make it your business to make a study of the question of ores and their discovery and where they are?

A. Yes, sir.

Q. That is essential, for a man carrying on your business?

A. Certainly, yes, sir.

Q. So, a year and a half ago, these ores, their character and the extent of the deposits, were not generally known?

A. I would say they were not generally known. They were known by us.

Q. How long has it been since they have been known by you?

A. They have been known several years by us.

Q. How far back does your knowledge of them go?

A. Several years, I answered you.

Q. Could you fix the date?

A. No, sir; I could not fix the date.

Q. When were you first there?

A. I said in July of last year.

Q. So, then, whatever you knew about them before that was just in a general way?

A. General information; yes, sir.

Q. How did you get that information—what you knew about them before you went there?

A. From statistics that have been reported in regard to the Chilean ores.

Q. Reported by whom?

A. By the Chilean government.

Q. How far back did they go?

A. I do not know how far back that information goes, Judge. I would not like to name the dates of it.

Q. How many times have you been there?

A. Twice.

Q. How long were you there on each visit?

A. You mean in Chile?

Q. Yes.

A. I was there about two months each time.

Q. Each time?

A. Yes.

Q. In area, just looking to the area of the land, what do your holdings there comprise?

A. Our area there consists of this mountain chiefly, which

is about 2,500 feet above the sea level, and the property itself, the ore, occurs about three-quarters of a mile long, and the ore is exposed for four or five hundred feet from the surface.

Q. I mean in acreages, if you can give it.

A. I do not know the exact acreage, in fact, and I would not like to make a statement about it. We acquired all the land that has any ore exposed in it, in this particular district, right in the immediate vicinity.

Q. Did you acquire any in any other district there?

A. No.

Q. You spoke of other lands having been acquired by others.

A. Yes.

Q. When were those acquired?

A. During the last year, that I know of specifically.

Q. Did anybody acquire any of them before you did, any steel operators in this country?

A. No, sir.

Q. So that you were the pioneers, so far as this country is concerned, so far as you know?

A. So far as the United States is concerned, yes.

Q. What other operators have acquired lands there? I mean United States operators.

A. No other United States operators that I know of.

Q. But others, you say, have been acquired by operators?

A. Yes, sir.

Q. Some, you stated, are on the market?

A. Yes, and they have been offered to us.

Q. Since when?

A. During the last year, since we acquired this property.

Q. And you did not accept those offers?

A. Certainly not.

Q. You declined them?

A. We declined them, because we thought we had sufficient tonnage of ore for so many years to come that we felt that we hadn't any interest in anything additional.

Q. You thought you had enough reserve, did you?

A. Yes.

Q. In estimating the cost of these Chile ores, you said you took the cost of mining and transportation?

A. Yes.

Q. Did you estimate anything else in that cost?

A. We estimated also on the quality of the ore, the richness of the ore.

Q. I understand; the richness of the ore.

A. Yes.

Q. And did you pay a royalty or did you own it in fee?

A. Paid a small royalty on it.

Q. You paid a small royalty?

A. Yes.

Q. Did you estimate anything besides that?

A. Besides the royalty?

Q. Besides the royalty; the cost of mining and the cost of transportation?

A. And its quality, yes. We figured the total cost of that ore to us, including the cost of installation of equipment, just as any cost would be made up in mining operations.

Q. Are those all the estimates you included there?

A. The cost of mining, the cost of transportation and the cost of installation of equipment, and the interest upon that, and the royalty cost.

Q. The installation of equipment; that is part of the cost?

A. Yes.

Q. You distributed that over the tonnage, pro-rated it in some way?

A. Yes.

Q. Those are all the elements of estimating the cost and delivering it here in this country, are they?

A. Yes; that embodies everything.

Q. How long have you been vice-president, did you say, of the Bethlehem Steel Company?

A. About one year.

Q. About one year?

A. Well, maybe not quite so long.

Q. Mr. Schwab is president of that company, is he not?

A. Yes.

Q. A large part of the product of that company in the past has been armor plate, has it not?

A. Do you mean in tonnage or value?

Q. Value.

A. In value, yes, a large tonnage of it, a large proportion.

Q. And gun forgings?

A. Gun forgings, yes.

Q. That forms a large part of the value?

A. Yes.

Q. A large part of it has been in specialties, in structural work?

A. We make armor and guns and specialties of every kind, but we are also large merchant steel makers.

Q. I understand, but I am getting now at the other branch of your business. What other concerns in the United States, except your company, make armor plate, or have made it in the past?

A. The Midvale Company and the Carnegie Steel Company make armor plate.

Q. And the Bethlehem Steel Company, and those are all?

A. Yes.

Q. Who besides your company makes gun forgings and guns?

A. The Midvale Steel Company.

Q. Who else?

A. There are a number of companies who make smaller forgings, like the Carpenter Steel Company.

Q. But the large ones, I mean.

A. The large ones, largely by the Midvale and the Bethlehem Steel Company.

Q. These specialties of which I spoke in structural steel, what companies in America besides yourself have been making them in recent years?

A. Structural steel?

Q. Not structural steel, but specialties in structural steel.

A. There are a number of companies that are competitors of ours in every business that we are interested in.

Q. You do not mean to say that there are a number of companies that are competitors of yours in armor plate?

A. I consider three companies a number of competitors; it is simply a difference of viewpoint.

Q. What three are your competitors in armor plate?

A. There are three of us; I say there are three engaged in the manufacture of it.

Q. Then, as a matter of fact, you have only two competitors in armor plate?

A. Yes.

Q. And large forgings for guns, you only have one competitor in that?

A. In very large forgings, yes.

Q. Very large ones?

A. Yes.

Q. Give me some idea of what you mean by very large forgings.

A. I mean forgings, say, for 12-inch guns.

Q. How about 10-inch guns?

A. Ten would be included in that.

Q. How about 8-inch guns?

A. In 8-inch, we have people who compete with us, and on 6-inch forgings.

Q. How about mortars above 8-inch—or are there any mortars of that size?

A. Large forgings would be 8-inch or 10-inch or 12-inches, and above. The Midvale Company and the Bethlehem Steel Company make those.

Q. Now, for your forgings and guns and armor plate is it desirable to have a special character of iron for that purpose?

A. A special character of pig iron?

Q. Yes, pig iron.

A. It is, yes.

Q. Is Swedish iron especially desirable for this purpose?

A. No, sir.

Q. What kind of iron is?

A. The kind of iron suitable for that purpose is made from pig iron that is made from ore in the Adirondacks, and also

from North Carolina. The two chief sources of that ore are the Cranberry in North Carolina and the Chateaugay in the Adirondacks.

Q. That is near Iron Mountain, the Cranberry?

A. I do not know the exact geography down there.

Q. It is in the western part of North Carolina?

A. Yes, it is a large body of ore down there that is generally known.

(Whereupon a recess was taken until two o'clock p. m.)

AFTER RECESS.

CHARLES AUSTIN BUCK

the witness under examination at the taking of recess, resumed the stand.

MR. DICKINSON: We do not care to question Mr. Buck any further.

MR. REED: I have one or two questions.

REDIRECT EXAMINATION

By MR. REED:

Q. Why do you not use these ores that you own on the north shore of Cuba?

A. We do not use the ores on the north coast because they are a leaner type of ore than can be gotten geographically better located to South Bethlehem.

Q. Why do you hold these north Cuba ores?

A. As a reserve; as a future tonnage of ore to convert into steel.

Q. Something was said this morning about the production that your company has of specialties such as gun forgings and armor plate and such things. What percentage of the tonnage of your company goes into specialties?

A. In the tonnage of material used there is only about ten per cent. of it goes into these specialties. The large tonnage is in merchant products, like rails and structural material.

Q. I see.

A. Which is known as merchant steel.

Q. You do not sell pig iron, do you?

A. We sell some excess tonnage of pig iron that we may have over our own requirements. It is not an important tonnage.

Q. Is that included in the ninety per cent.?

A. I am speaking of the tonnage of steel—the requirements of pig iron converted into steel.

MR. REED: That is all, Mr. Buck.

MR. DICKINSON: That is all.

MR. REED: Mr. Snyder.

HENRY S. SNYDER,

was called as a witness on behalf of the defendants, and being first duly sworn, testified as follows:

DIRECT EXAMINATION

By MR. REED:

Q. Where do you live, Mr. Snyder?

A. Bethlehem, Pennsylvania.

Q. How long have you lived there?

A. All my life; forty-four years.

Q. What is your occupation?

A. At present, vice-president of the Bethlehem Steel Company, and several of our subsidiary companies.

Q. Will you give us the names of those of your subsidiary companies of which you are an officer, which have to do with the mining of iron ore?

A. The principal iron ore producing company we have is the Juragua Iron Company; also president of the Bethlehem Iron Mines Company, which is not an operating company; simply an ore holding company.

Q. Any others?

A. President of the Cheever Iron Ore Company, in which we own a controlling interest, Witherbee-Sherman & Company owning a minority interest.

Q. How long have you been vice-president of the Bethlehem Steel Company?

A. Since 1906.

Q. And prior to that time had you any connection with the Bethlehem Company?

A. Since 1886, in various positions; as secretary and treasurer, assistant to the president, and so on.

Q. Are you familiar with the various sources of ore supply of the Bethlehem Steel Company?

A. I am, yes.

Q. From what sources does it obtain its ore supply at the present time?

A. From our Cuban property; Sweden; the Adirondacks, and some from the Lake region.

Q. Any from New Jersey or southeastern New York?

A. No.

Q. The Sterling mine?

A. The Sterling mine; yes, we do get some small quantity from the Sterling mine.

Q. What ores does your company own or control in the Adirondack region, Mr. Snyder?

A. The ores owned by us in the Adirondack region are those of the Cheever Iron Ore Company, in which, as I said a moment ago, we own a controlling interest.

Q. Witherbee, Sherman & Company owning the balance?

A. Witherbee, Sherman & Company owning the balance of the interest.

Q. Where are the Cheever properties?

A. At Port Henry, New York.

Q. That is near Mineville, is it?

A. Yes, that is near Mineville; about five miles from it.

Q. And what tonnage is produced by the Cheever Mining Company?

A. About 5,000 tons a month.

Q. Do you take all of that?

A. No, we do not. We sell some of it.

Q. Do you get other iron ores from the Adirondack region?

A. Yes.

Q. Than those which the Cheever Company mines?

A. Yes; principally from Witherbee, Sherman & Company. About 200,000 or 300,000 tons, I imagine.

Q. What is the quality of that Adirondack ore——

Mr. Dickinson: Did you say a month?

The Witness: A year.

Mr. Dickinson: 200,000 or 300,000 tons a year?

The Witness: About 250,000 tons a year.

By Mr. Reed:

Q. What is the quality of that Adirondack ore which you get from them; is it of good quality?

A. It is.

Q. How high does it run in iron?

A. Ranging from 60 to 65 per cent.

Q. Bessemer or non-Bessemer?

A. Non-Bessemer.

Q. Is it suited for the making of the better qualities of steel?

A. Oh, yes.

Q. Now, as to this Swedish ore, what quality is that?

A. Very good.

Q. In iron how high does it run?

A. In iron about 66 per cent.; 65 or 66 per cent.

Q. Is it Bessemer or non-Bessemer?

A. Non-Bessemer.

Q. You make open hearth steel exclusively, do you not?

A. We do.

Q. What tonnage are you now getting annually from Sweden?

A. About 300,000 tons.

Q. All of that comes from this large deposit at Kiirunavarra, does it?

A. Exactly.

Q. Have you been at the Kiirunavarra mine?

A. I have not, no.

Q. From which part of Cuba does your present supply come?

A. From what are known as the south coast properties,

about twenty-five miles east of Santiago; from the properties of the Juragua Iron Company.

Q. What tonnage have you in reserve in those properties on the south shore of Cuba?

A. Estimated about from two and a half to four million tons.

Q. Is it of good quality?

A. Yes; it is a Bessemer ore, running about 55 to 58 or 59 per cent. in iron.

Q. You have properties on the north shore of Cuba, too, have you?

A. We have.

Q. Have you yourself personally examined those?

A. I have.

Q. At different times?

A. A number of times.

Q. Have you examined also, and are you familiar with the properties of other owners on the north shore of Cuba?

A. I have been on a number of them.

Q. You have made estimates of the tonnage of your own company there?

A. I have, yes.

Q. Have you made estimates of the tonnage of other companies there?

A. Yes.

Q. That north shore ore is what is called limonite, is it not?

A. It is.

Q. And that, one of my geological friends tells me, is a hydrated hematite?

A. Yes, hydrated hematite, I believe it is called.

Q. In its natural condition, what percentage of its weight is iron?

A. In its natural condition, it contains about, variously, from about 25 to 40 per cent. of moisture.

Q. Of moisture?

A. Yes.

Q. How much of that is hydroscopic moisture?

A. Using 25 to 40 per cent. of total moisture, there would be about 15 to 30 per cent. of hydroscopic moisture.

Q. And how much of it is combined moisture?

A. The balance, which would be about 10 to 12 per cent.

Q. Hydroscopic moisture is that which passes off at a temperature of 212 degrees Fahrenheit?

A. Exactly.

Q. Combined moisture requires a higher temperature to expel it, does it not?

A. Exactly.

Q. What percentage of the natural ore is iron? I do not know that you gave us that percentage.

MR. DICKINSON: 55 to 59, he said.

MR. REED: Of the north shore ores.

MR. DICKINSON: Oh, of the north shore?

MR. REED: Yes.

THE WITNESS: Using those same figures, and adopting some average of moisture, let us say 35 per cent., we will place it.

By MR. REED:

Q. When these ores have been dried——

A. The balance would be iron.

MR. DICKINSON: You mean 35 per cent. moisture?

THE WITNESS: Yes.

By MR. REED:

Q. You do not mean—let us get that straight——

A. You asked me what percentage, did you not?

Q. Yes. In the natural ore, what percentage of the weight is iron?

A. Well, that is difficult to answer.

Q. Is it customary to make the analysis dry or wet?

A. Dry.

MR. DICKINSON: Did the witness answer the other question?

THE WITNESS: No. I cannot answer the other question.

By Mr. Reed:

Q. Let me put it in this way: After the moisture, both the hydroscopic moisture and combined moisture, have been expelled, what percentage of the ore is iron?

A. It will range about 50 per cent.

(After an informal colloquy.)

Q. If I correctly understand you, Mr. Snyder, your testimony is that this ore, when dried, will analyze about 50 per cent. in iron?

A. Dried, at 212 degrees.

Q. And as it carries about 35 per cent. of hydroscopic and combined water in its natural state, the ore would analyze about 32½ per cent. in its natural state?

A. Yes.

Mr. Dickinson: You mean of iron?

Mr. Reed: 32½ per cent. of iron in its natural state.

By Mr. Reed:

Q. Does this ore contain any other metals?

A. Yes; it contains principally nickel; about one-half of one per cent.

Q. Dry analysis?

A. Yes, sir; dry analysis always.

Q. Is that nickel a detriment or an advantage in the steel that is made from those ores?

A. It is an advantage.

Q. Is it an advantage commercially?

A. Yes; in so far as it affects the quality of the steel.

Q. It makes it a more desirable product?

A. Exactly, yes.

Mr. Dickinson: Let me ask you, because it may save further examination, do you mean by that that that ore, when dried, with that amount of nickel in it would sell for more than it would if the nickel were not in it?

The Witness: I should dislike to say that, as carrying a value in dollars and cents, but it does make a superior steel.

By Mr. Reed:

Q. You have told us, Mr. Snyder, that you have made esti-

mates of the tonnage of ore on the north coast of Cuba owned by your company and by other companies?

A. Yes.

Q. And, to begin with, I wish that you would state what tonnage of ore is held or controlled by your own company.

A. The estimated amount of the ore held and controlled by our own company of what is known as the north coast ores I estimate at 770,000,000 tons.

Q. That is wet or dry?

A. That is wet, in place.

Q. That will average about 35 per cent. of all kinds of moisture?

A. Right.

Q. What tonnage of north coast ores is owned or controlled by the Pennsylvania Steel Company or its subsidiary companies?

A. Estimating that largely on the basis of their own examinations, they have placed it at 1,400,000,000 tons.

Q. Is that all in one deposit, or is it in two districts?

A. No; that is in two districts, one what is known as the Mayari district, which is at present being operated by the Pennsylvania Steel Company, and the balance in what is known as the Moa region.

MR. DICKINSON: What was the amount mentioned?

MR. REED: 1,400,000,000.

MR. DICKINSON: Besides or including yours?

THE WITNESS: Besides ours. That is the holdings of the Pennsylvania Steel Company—1,400,000,000. Ours, I stated as 770,000,000.

MR. DICKINSON: I understood yours was 770,000,000.

THE WITNESS: That is right.

MR. DICKINSON: Does the other question go simply to the Pennsylvania or to all the balance?

THE WITNESS: The Pennsylvania.

MR. DICKINSON: And you say the Pennsylvania, then, is how much?

THE WITNESS: 1,400,000,000.

By Mr. Reed:

Q. How much of that is in the Mayari district, and how much in the Moa district? How do you divide them?

A. I have not segregated that; that is, I have it in detail in figures, but not in my mind. I could give it to you.

Q. You have thought over this subject before to-day?

A. Oh, yes.

Q. Did you ever hear of the Buena Vista Iron Company?

A. Yes.

Q. Have they any iron ores on the north coast?

A. Yes; they have rather extensive holdings.

Q. What tonnage do you estimate that they have?

A. Allow me to refresh my memory. I do not like to trust my memory too much. (After consulting memorandum.) 300,000,000 tons.

Q. All of these tonnages are of wet ore?

A. Always wet ore in place.

Q. How about the Guantanamo Exploration Company? Have they any?

A. I estimate them to have 210,000,000.

Q. What was the estimate for the Buena Vista Company?

A. 300,000,000.

Q. Does the Eastern Steel Company own any ores there?

A. The Eastern Steel Company have holdings there; yes, sir. I estimate those at 50,000,000.

Q. The Steel Corporation owns some ores there, too, does it not?

A. Yes; it does.

Q. About how many tones?

A. 200,000,000, I have placed that at.

Q. Are there any ores not owned by these companies that you have mentioned?

A. Yes; there are scattered holdings by individuals and small companies, aggregating 300,000,000.

Q. I want to ask you about this Guantanamo Exploration Company: Is that controlled by any furnace company in this country or elsewhere?

A. As far as I know not. They are individuals.

Q. How about the Buena Vista Iron Company?

A. That is also controlled by individuals.

Q. What company, at the present time, is shipping these north coast ores?

A. The Spanish American Iron Company, which is a subsidiary company of the Pennsylvania Steel Company.

Q. Where are these ores being used?

A. They are being used at their plant at Sparrows Point, and I believe also at Steelton. The plant of the Maryland Steel Company at Sparrows Point and the plant of the Pennsylvania Company at Steelton.

Q. The Maryland Steel Company is a branch of the Pennsylvania Steel, is it not?

A. It is a branch of the Pennsylvania Steel.

Q. Are you familiar with the deposits of iron ore controlled by your company in Chile?

A. Yes.

Q. Have you been there?

A. I have been there.

Q. Have you examined the deposits?

A. I have.

Q. Are those deposits being prepared for shipment?

A. They are, yes, on a very large scale.

Q. Quarrying or mining work has commenced?

A. It has, yes, but only in a small way. The large development is now being taken up and equipped for.

Q. By what route will those Chilean ores be brought to this country?

A. Shipped from the port; that is, Coquimbo, north along the west coast of South America, through the Canal, and to either Philadelphia or New York.

Q. When do you plan commencing shipments of that ore?

A. In about two years.

Q. Have you had that ore analyzed?

A. Yes.

Q. Different samples?

A. Yes, a large number of them.

Q. About how many?

A. Two or three hundred samples.

Q. How does it run in iron content?

A. About 68 per cent. of metallic iron.

Q. Is it Bessemmer ore?

A. It is.

Q. How does the phosphorus run?

A. The phosphorus varies from—well, within the Bessemer limits, from .05.

Q. It is all below that, is it?

A. Yes.

Q. How far are these ore deposits of yours from the ocean?

A. Four miles.

Q. Does it lie above sea level?

A. About 2,200 or 2,500 feet above sea level.

Q. Is it in a flat country or mountainous?

A. A mountainous country.

Q. Is that 2,200 or 2,500 feet the altitude of the apex of the deposit?

A. Yes.

Q. How high above the sea level is the valley that lies below the deposit?

A. About 1,800 feet.

Q. How does this deposit lie? Is it covered by overburden of any kind?

A. No, it is outcrop, without any overburden whatever.

Q. No stripping at all?

A. No stripping at all.

Q. Do you plan to mine it, by underground workings?

A. Mine it in open benches, just as the layout of a large quarry.

Q. Will the mining cost be small or great, compared with other mines?

A. Small.

Q. Have you made any estimate of the tonnage in the deposits you control in Chile?

A. Yes, we have estimated with the present development about 60,000,000 tons; the probable ore is very large and can be stated as 100,000,000 tons additional.

Q. Does that estimate include any ore that would be won

by underground mining? That is, would you have to go below the floor of the valley to get that?

A. No, not at all.

Q. Have you any reason to believe that those ore beds extend below the valley level?

A. I would not state that, no.

Q. You have not made any explorations?

A. No.

Q. Why have you not explored it?

A. We have only controlled the property for about six months; six or eight months.

Q. How many years would this ore that you have in sight run the Bethlehem Steel Company if you drew from that source alone, assuming that your consumption remains what it is at the present time?

A. Our consumption of ore at the present time is about a million and a quarter tons or a million and a half tons. That would mean a matter of, roughly, sixty years, of the amount of ore we have already measured up, without counting anything beyond that.

Q. That is all ore that lies in sight?

A. Yes, in sight.

Q. You do not expect to see the ore mined below the Valley level? You do not expect to live to see it?

A. I do not expect to live to see it, no.

Q. What is the texture of this Chilean ore; is it hard or soft ore?

A. It is hard ore, slightly magnetic hematite; hard ore, hard and dense.

Q. Is it desirable ore for use in the furnace?

A. Very.

Q. Does it carry any moisture?

A. No, practically none.

MR. REED: You may cross examine, Judge.

CROSS EXAMINATION

By MR. DICKINSON:

Q. This Chilean ore has not had any material effect upon

the steel industry in the United States from 1901 to 1912, has it?

A. It has not.

Q. Has the Cuban ore had any material effect, north Cuban ore, during that same period?

A. From 1901 to 1912, it has.

Q. To what extent was it brought into this country prior to that time, do you know?

MR. REED: From what time?

MR. DICKINSON: Including 1912, and the years preceding it back to 1901.

THE WITNESS: The importations of Cuban ore in 1912 were 1,400,000 tons.

By MR. DICKINSON:

Q. North Cuban, I asked you about.

A. North Cuban, I should say of that there was something over 50 per cent. of it was north shore. No, I think that is too high. Roughly about 50 per cent.

Q. 50 per cent. of 200,000 tons?

A. 50 per cent. of 1,400,000 tons, slightly over 1,300,000 tons.

Q. What was the whole consumption in that year of ore in this country?

A. The production of iron ore and consumption, I assumed about the same figures, was close to 60,000,000 tons.

Q. Were there any shipments from north Cuba prior to 1910?

A. I think not; I think that the shipments from the north coast started up about two years ago.

Q. How about the south coast in 1909?

A. In 1909 I would take that to be something in the neighborhood of about 600,000 tons.

MR. REED: Is there any objection to the witness refreshing his recollection by the pamphlet that you offered in evidence this morning?

THE WITNESS: I should like to.

MR. REED: Have you any objection to the witness refresh-

ing his recollection with the pamphlet that you put in evidence?

MR. DICKINSON: I heard you, and you interrupted me as I was speaking to the witness. I will present to you page 27 of the bulletin I have in my hand, entitled "Production of iron ore, pig iron and steel in 1912," and ask you to state the importations there, as shown, to the United States from north Cuba in 1909, and whether that accords with your recollection.

THE WITNESS: You want me to state from this table which were the north coast ores?

MR. DICKINSON: Yes. As for 1909, and whether or not that accords with your recollection.

THE WITNESS: Yes. In 1909 there were no importations from the north coast.

By MR. DICKINSON:

Q. And what from the south coast?

A. From the south coast? All the balance must be south coast, and that shows the total in 1909 as 936,000.

Q. Take 1908 and give them both.

A. In 1908 there were no importations from the north coast.

Q. How about the south coast?

A. The iron ores, all coming from the south coast, according to this statement, showed 620,836.

Q. Were there any importations from the north coast from 1901 down to 1909 inclusive?

A. No.

Q. When did the importations shown there begin from the south coast?

A. 1910.

Q. From the south coast?

A. Oh, the south coast; I beg your pardon. The table here shows that they began in 1884 from the south coast.

Q. What was it in 1901?

A. The south coast, 552,000.

Q. Do you know the amount of iron ore that was consumed in the United States during that year, about?

A. In 1901?

Q. Yes.

A. No, I cannot state it from recollection.

MR. REED: You will find it in that same pamphlet.

THE WITNESS: Do you care to have me look at it. What page is it?

MR. REED: Page 18.

By MR. DICKINSON:

Q. Please give me, as shown by that table, the importations from both the north and from the south shore for the years following 1909? I believe you have testified about that. Give it for separate years from each source.

MR. COLTON: I think you will find that on page 27, for that year.

By MR. DICKINSON:

Q. (Continuing) I think I asked about 1909. Give 1910, 1911 and 1912, from the north and south coasts each, for each year.

A. In 1910 the importation of north coast ores was 307,700. The total importations of Cuban ore that year, according to this table, were 1,462,000, the balance of 1,155,000 tons being south coast ores.

Q. In 1911 and 1912?

A. In 1911 the total importations were 1,163,000 tons, of which 387,791 tons were north coast and the balance south coast. In 1912 the total importations were 1,397,000 tons, of which 446,176 tons were north coast ores, the balance being south coast.

Q. What is the cost of nodulizing the iron of the north coast, per ton?

A. I can only state that as an estimate of my own, not having had any experience in it. I should say it would be from about 75 cents to a dollar a ton.

Q. What degree of heat does it require?

A. I cannot answer that.

MR. DICKINSON: That is all.

MR. REED: That is all, Mr. Snyder. Thank you.

MR. LINDABURY: Mr. Hughes, will you take the stand?

EDWARD S. HUGHES

was called as a witness on behalf of the defendants, and being duly sworn, testified as follows:

DIRECT EXAMINATION

By Mr. Lindabury:

Q. Where do you live, Mr. Hughes?

A. Abilene, Texas.

Q. Of what State are you a native?

A. North Carolina.

Q. I believe you graduated at Princeton in 1883, did you not?

A. 1882.

Q. 1882?

A. Yes.

Q. And when did you go to Texas?

A. 1882.

Q. Immediately?

A. Yes.

Q. And did you go into business there?

A. Yes, sir; went into the hardware business in 1882.

Q. Have you been in the hardware business in Texas since that time?

A. I have, yes.

Q. Are you in any other kind or kinds of business there?

A. Yes, sir.

Q. What?

A. Banking and transportation.

Q. What kind of transportation?

A. Railroad and steamship, too, and real estate; a little.

Q. What is that?

A. Real estate, some.

Q. What is the name of your hardware concern?

A. Ed. S. Hughes Company.

Mr. Dickinson: What?

The Witness: Ed. S. Hughes Company.

By Mr. Lindabury:

Q. And where is that company located or doing business?

A. Abilene, Texas.

Q. Has it been there all the time?

A. Well, it has not been under that name all the time.

Q. But your business—

A. I have been in it all that time, and the business has been Ed. S. Hughes Company since 1889.

Q. And it has been at Abilene?

A. Abilene, yes, sir.

Q. You live in Texas, I take it?

A. Yes, sir.

Q. At Abilene?

A. Yes.

Q. Do you deal in steel products?

A. Some of them, yes.

Q. What of them?

A. Wire and nails, and sheets, corrugated iron, and a little tin plate.

Q. Wire and nails—

A. Wire fencing.

Q. From whom do you buy your wire and nails?

A. The American Steel & Wire Company of Texas.

Q. Do they handle the products of the American Steel & Wire Company?

A. Yes, sir.

Q. From whom do you buy your sheets?

A. We buy them from different companies; largely from the National Enameling Company of St. Louis, and the Wheeling Corrugating Company.

Q. What percentage of your nails do you buy from the American Steel & Wire Company?

A. Well, recently we have been practically buying all of them.

Q. And formerly?

A. Well, at times we bought practically all of our products from the Colorado Fuel & Iron Company.

Q. And of your sheets how is that divided?

A. Well, we have bought very little sheets from the American Sheet & Tin Plate Company.

Q. What percentage of your requirements, about, have you bought from them?

A. I do not do the buying in that line, but I notice the bills, and I do not remember when we have had a bill from them.

MR. DICKINSON: From whom is that?

THE WITNESS: The American Sheet & Tin Plate Company.

By MR. LINDABURY:

Q. What about corrugated iron? Where do you get that?

A. The same people. I included that in the sheets.

Q. And fencing; where do you get that?

A. We have been buying a little from the American Steel & Wire Company. We have handled some of the Pittsburgh Steel Company's fencing.

Q. Can you tell me whether or not there is competition in these various products—in the sale of these various products by the manufacturers in your state and territory?

MR. DICKINSON: That is excepted to, because the term "competition" is vague and undefined, and because it calls for a condition as of the present time, which is excepted to as irrelevant.

MR. LINDABURY: Now, you may answer.

THE WITNESS: We think so; yes, sir.

By MR. LINDABURY:

Q. How is it manifested?

A. Well, we are solicited by travelers from different concerns, and the same effort is made to get our business as is made in other lines.

Q. Take wire products, for instance; who solicits the trade in your locality; what concerns?

A. The Pittsburgh Steel, Colorado Fuel & Iron, and the American Steel & Wire.

Q. And how—

A. And in Texas some of the Birmingham concerns have been soliciting.

Q. Are you pretty well acquainted with trade conditions throughout Texas?

A. Fairly well.

Q. Does your business take you in different parts of the State?

A. Yes, sir.

Q. So you are pretty well informed generally as to trade conditions throughout the State, are you?

A. Fairly well, yes.

Q. Fairly well?

A. Yes, sir.

Q. How is the solicitation carried out? By visitations from canvassers, or by letters, or in some other way?

MR. DICKINSON: Now, that is objected to, because the question does not define "solicitation"; whether he means that of his own firm or of others, and if of others, the witness has not qualified himself to speak.

MR. LINDABURY: You may answer, Mr. Hughes.

THE WITNESS: It is by letters, and also by personal solicitation—traveling men.

By MR. LINDABURY:

Q. Have these different concerns that you have mentioned as manufacturing and selling wire products, traveling men or canvassers?

A. Yes.

Q. Throughout the State?

A. Yes.

Q. And how often do they make their rounds, as a rule?

A. I am not able to say that; I do not know.

Q. You do not know?

A. No.

Q. Do they offer, or do they not, competitive prices on wire products?

A. At times.

Q. What do you mean by "at times?"

A. Well, if the market is what you would call steady, there would be the same prices from practically all. Then there is a rise or a decline in the market—rather, in their offering; that is what makes the market, as I see it.

Q. Yes. Speaking of a period of ten years past, have there been changes from time to time in the quotations on these wire products?

A. Yes, sir.

Q. How long has the Pittsburgh Steel Company been in the market there?

A. I would estimate the time as seven or eight years.

Q. And has it or not been active and pressing in the offer of its products?

A. It has been quite active.

Q. And about the Colorado Fuel & Iron Company?

A. They have been—with the exception of a year or two they were very active. For a couple of years they were not so active with their trade.

Q. Why have you given your purchases lately of wire products almost exclusively to the American Company?

MR. DICKINSON: That is excepted to as irrelevant and incompetent.

THE WITNESS: On account of their carrying a very large and complete stock of wire products in Texas, and on account of their prices being what we call right, and fair treatment.

By MR. LINDABURY:

Q. Yes. Well, take sheets; why have you given your trade in sheets and corrugated iron almost entirely to their competitors?

A. Well, because we have gotten better consideration on the same lines from others.

Q. And as to prices, have they given you better prices or not?

A. That has been part of what we consider better treatment.

Q. Have you dealt in either of these products with the concerns that you have bought from on anything but a purely business basis?

A. No, sir.

Q. Buying as best you could?

A. Yes.

Q. Have you bought anything from the Sheet & Tin Plate Company in recent years?

A. I do not remember that we have. I do not remember an invoice from them.

Q. But entirely from these others that you have named?

A. Yes, sir.

Q. What proportion of your requirements in fencing have you bought from the American Company during the last——

A. For the last two years we have handled the American product. Before that we handled the Pittsburgh fencing, largely.

Q. Why did you formerly handle the Pittsburgh fencing?

A. Well, I do not know that I can answer that. We got lined up with them. Their fencing was satisfactory and their price, that was satisfactory. Then, when the American people put their stock in Texas, and we could get wire or wire nails and fencing, it made it very convenient.

Q. Has or not in all these products competition of these different concerns in Abilene and elsewhere in the State where you have had personal knowledge of its conditions been active, normal and of the ordinary sort?

Mr. Dickinson: This is objected to because it is not shown in what parts of the state he has had the information which would qualify him to answer this question; it is not shown what is meant by normal, or what elements are involved. It is also objected to because it applies to a period since the filing of the bill, and is therefore irrelevant.

The Witness: Well, construing "normal" for my own benefit as being approximately as we are offered other goods, I would say yes.

By Mr. Lindabury:

Q. There has been that character of competition?

A. Yes.

Q. Have you observed, at any time during the last thirteen years, any dominancy on the part of any manufacturer of any of these products in the trade in your state?

A. The location of a stock in Texas gave a dominancy to the American Steel & Wire Company from that standpoint.

Q. And when was that location effected?

A. About 1907.

Mr. Dickinson: What is that?

MR. LINDABURY: He says that has given a dominancy to them.

By MR. LINDABURY:

Q. Except as that location of a warehouse there gave them dominancy or a lead in the trade, have they had any other, so far as you have observed?

A. Not that I know of.

Q. Have you noticed any indication of a combination or agreement as to price, territory, or anything else, between the manufacturers offering or selling these steel products in your state?

MR. DICKINSON: This is objected to as being vague and indefinite, the term "indication" calling for a conclusion of the witness, and not calling for facts upon which the estimate made by the witness can be judged.

THE WITNESS: Well, a buyer naturally wonders why he cannot get a better price, you know. Apart from that I do not know of any. He is never satisfied exactly.

By MR. LINDABURY:

Q. Has it been the practice of your concern to negotiate for a better price with the different producers?

A. We have always felt we needed the bottom price. It takes a fight to get it.

Q. Have you ordinarily been able to get it by negotiation?

A. We traded when we did the best we thought we could.

Q. Did you sometimes get it from one and sometimes from another?

A. Yes, sir.

Q. Finally, have you ever observed in the trade in steel products there anything other than the ordinary, healthy, normal competition?

A. It seemed to us just the same as other lines.

Q. Has it or not been active all along the line?

A. Yes, sir.

Q. And during these years we have mentioned?

A. Yes, sir; more or less at different times. For instance, the Colorado Fuel & Iron Company, who were active in the market, were out of the market for a while.

Q. When was that?

A. About three years ago.

Q. For how long were they out of the market?

A. They were out for a year and a half, out of the wire and nail market.

Q. Do you happen to know why?

A. Well, when the American Steel & Wire Company put their products on the Texas coast, warehoused them there, it required a readjustment of the entire rates, and took them a good while to get that done.

Q. You mean the readjustment of their railroad rates?

A. Yes, sir. They claimed that they were full on other lines of orders.

Q. And finally they got the necessary adjustment of rates?

A. They came back actively in the market.

CROSS EXAMINATION

By Mr. Dickinson:

Q. Mr. Hughes, how long did you say you had been in Abilene?

A. I have been there about 31 years.

Q. And during the whole of that time you have been engaged in the hardware business?

A. Yes, sir.

Q. How much of that time have you been engaged in other activities?

A. Pretty nearly all the time.

Q. Practically all the time?

A. I have been in the bank there actively, well, half actively in the bank, since 1889; about 21 years.

Q. What else were you engaged in?

A. I have built a little railroad there. We built that in 1906 and 1907; six or seven years ago.

Q. Have you anything to do with the operating of it?

A. Yes; I am general manager of it.

Q. Are you general manager of it now?

A. Yes, sir.

Q. And you have been general manager since 1906 or 1907?

A. I have been general manager about four years.

Q. What position do you hold in the bank?

A. I am president of the bank.

Q. Have you an office in the bank?

A. No, sir.

Q. You have no office there?

A. No, sir.

Q. There is an office there where you go?

A. Yes. The cashier is the manager of the bank. It is a national bank.

Q. It is a national bank?

A. Yes.

Q. And you are president of it?

A. Yes.

Q. Do you ever go to the bank?

A. Yes, sir.

Q. Do you pay any attention to its affairs?

A. Quite a little, yes. You might say I was half active in it.

Q. What do you mean by "half active" in it?

A. I do not have anything to do with the details of the bank, but with the policies.

Q. You attend to the policies?

A. I have a voice in the policies.

Q. When you say "half active," do you go there every day?

A. No, sir.

Q. Do you have stated times for going there?

A. No, sir.

Q. You mean you leave the bank to be run by other people, and you are president of it?

A. The cashier is the active manager, responsible for the management of the bank.

Q. But you are the president of the bank?

A. I am the president of the bank.

Q. Do you know what goes on from day to day?

A. I know the policies of the bank.

Q. Do you keep a line on their loans and discounts?

A. Yes, sir.

Q. And credits?

A. Yes, sir. They are submitted to me at my own office—new loans that are of a certain amount.

Q. Where is your office?

A. My hardware store is right next to the bank.

Q. You do give a part of your time to the banking business?

A. Yes, sir.

Q. What is the capital of that bank?

A. The capital, surplus and undivided profits are about $165,000.

Q. What is the capital stock?

A. $100,000.

Q. What are your duties in connection with this railroad?

A. Largely the financing.

Q. You are the general manager of it, you say?

A. Yes, sir.

Q. The general manager has control, has he not?

A. The assistant general manager is in charge of the operation.

Q. Still, you are responsible, are you not, as general manager?

A. I am responsible.

Q. For the transportation?

A. Yes, sir.

Q. And the safety of the lives of the people? You are responsible?

A. Yes, sir.

Q. What is the length of that railroad?

A. Fifty miles.

Q. Do you ever go over that road?

A. I go over there some.

Q. So a part of your time is devoted to that?

A. Yes.

Q. Are you in the real estate business also?

A. I just own real estate. I am not in the business.

Q. Do you carry on any other business, then, besides this banking business, the railroad business and the hardware business?

A. Well, I am in the steamship business.

Q. Where is your office for the steamship company?

A. We have an office in New York.

Q. You are in New York occasionally, then?

A. Yes.

Q. How often?

A. I have been in New York one-third of the time during the last three or four years.

Q. A third of your time?

A. Yes.

Q. Your hardware business goes on all the time, does it?

A. Yes.

Q. What position do you hold in the steamship company?

A. I am president.

Q. You are the president of that?

A. Yes.

Q. What is the size of that business, how many ships have you?

A. It is very small, only about a couple of ships.

Q. And it keeps you away a third of your time?

A. Yes.

Q. Now, in the last four or five years what have been your active duties in the hardware business?

A. Financing, and any new questions.

Q. What would you embrace under the head of "new questions"?

A. Well, the question of a new line of goods, or general questions of policy. One of the vice-presidents is general manager, and another vice-president is manager in charge of sales. I am merely in a consulting position.

Q. Yours is one of higher responsibility in a general supervising way, is it?

A. Yes.

Q. How far personally in this financing and attending to the policies of this company have you had to do, in the last four or five years, with the actual question of details of purchases from time to time and negotiating for purchases?

A. Very little.

Q. Well, now, how far do you come in contact with drummers and solicitors?

A. Very little.

Q. They go mostly to your other people?

A. The buyers; the manager buys.

Q. How many solicitors, or drummers, as we would call them, of the various sellers of the various kinds of hardware that you have mentioned here have you come in personal contact with in the last four or five years, and please name some of them and to what extent you come in contact with them.

A. I have come in contact with them very little.

Q. If you come in contact very little with those who sell to your company, I suppose you come in less contact with those who sell generally over the State to other people, in the same line of business, do you not?

A. You mean do I come in contact with them as they come there to solicit? I thought you meant that.

Q. That is what I did mean.

A. My acquaintance with the trade has kept me in pretty close touch with the travelers for the different companies.

Q. You mean by close touch, so that you know them by sight?

A. I know them personally, but if they wanted to sell my firm they would not come and solicit the business from me.

Q. And all these things would be transacted with other people?

A. Yes.

Q. If they were selling to other people, other than your firm, they would not communicate with you about that?

A. No, sir.

Q. Your knowledge, then, of what drummers and soliciting agents or vendors of hardware in Texas do is very largely of a general character, as you have described, is it not?

A. Yes.

Q. Now, take the question of competition between drummers and representatives of other companies; that is a matter that would come more directly before the purchasing

agent of your company or your general manager, would it not?

A. Yes.

Q. Now, is it not a fact, well known and notorious, that for long periods, that is, from 1901 down to 1911, upon certain lines of hardware—take, for illustration, nails—there was a uniform price that was known to the trade as a price at which the vendors sold, and that all of the dealers in those lines had to pay that same price?

A. I don't think so.

Q. Well, do you know to the contrary?

A. Yes.

Q. Do you mean to say that you know that there has been no period from 1901 down to 1911 at which on such articles as nails there has been a uniform price to the trade?

A. That there has been no period? No, I didn't say that.

Q. What did you say?

A. I said that there had been competition at different periods.

Q. You do not undertake to state just when they were or how long they continued?

A. No, sir.

Q. If there has been competition at different periods there have been periods at which there was no competition?

A. There have been periods when the market was the same.

Q. And everybody bought from the vendors at the same price and that was generally known, was it not?

A. I have not that information, if that is correct.

Q. You say the market was the same, the price was the same. What do you mean by that?

A. When we went into the market and tried to get a lower price, we couldn't get it.

Q. All of them quoted you the same price?

MR. LINDABURY: Let him finish.

MR. DICKINSON: I thought he had.

MR. LINDABURY: I think not.

MR. DICKINSON: Had you finished?

THE WITNESS: I think so.

By Mr. Dickinson:

Q. And notwithstanding these efforts, all of them quoted you the same price, is that a fact, at times?

A. I suppose so, yes.

Q. Don't you know that to be a fact, Mr. Hughes?

A. Yes, that would be so.

Q. What tonnage do you handle in sheets as compared with the tonnage you handle in nails and wire fencing?

A. Would you want exact figures?

Q. Oh, no; of course I would not expect you to remember the exact figures.

A. You know it depends a good deal on periods. The last couple of years our sheet trade has been good and our wire nail trade has been light.

Q. Take from 1912 back.

A. At certain periods our trade was extremely active, because we have a prairie country and it was all fenced. I would say 50 per cent. was sheets.

Q. What year have you in mind?

A. Oh, that is a general estimate I am making; very general. I have not any definite figures.

Q. About how large a business in hardware does your concern do in a year, in round numbers?

A. About $400,000, normal.

Q. You handle a great many things besides sheets, corrugated iron and wire fencing and nails?

A. Yes.

Q. What proportion of your entire business would you say would be represented by the sales in those commodities, in money value?

A. Wire nails and sheets?

Q. Wire nails and sheets and fencing.

A. I would say ten per cent.

Q. And you deal in cutlery, do you?

A. Yes.

Q. That is very expensive, compared with the other?

A. Yes, as compared with the tonnage.

Q. And you deal in other expensive kinds of hardware; I

mean comparatively expensive, as compared with wire fencing and sheets and nails?

A. Yes.

Q. You say that the American Steel & Wire Company got a dominancy there owing to the very extent of their business, largely brought about by their being able to establish a warehouse?

MR. LINDABURY: I beg your pardon, he didn't say that. I object to that.

MR. DICKINSON: I do not want to appear to say what he has not stated. Will you answer that question and explain it, if you will?

THE WITNESS: I said that they got a dominance in the trade when they established a large and complete stock of wire nails and fencing on the Texas coast.

By MR. DICKINSON:

Q. Wasn't that very largely on account of the extent to which they handled those articles compared with other concerns?

MR. LINDABURY: I object to that.

MR. DICKINSON: Answer the question.

THE WITNESS: I think so, yes.

By MR. DICKINSON:

Q. You spoke of handling the product of the American Steel & Wire Company in the last two years, and you used the word "handle." What do you mean by that, anything special?

A. I mean we had bought practically all our wire nails from them for the last couple of years.

Q. Does anyone else there in Abilene buy wire nails from them except you?

A. Yes.

Q. Other people do?

A. Yes.

Q. You did not mean to say that you were their exclusive agents?

A. No.

Q. And you were not an agent of theirs at all?

A. No. We buy and pay cash for what we get.

By Mr. Lindabury:

Q. Has the Steel & Wire Company been able to quote better prices, since they established a warehouse on the coast of Texas, than their competitors?

A. Well, the main point of their dominance is a question of time, the question of quick delivery.

Q. Have they also been able to quote better prices? How has their competition as to prices been?

A. Yes, it has been better.

Q. Since they established the warehouse on the coast of Texas?

A. Yes.

Mr. Dickinson: When did he say that that was established?

Mr. Lindabury: In 1907 or 1908. That is all.

Mr. Dickinson: That is all.

Mr. Reed: Mr. Ellis, will you be sworn?

EDWIN E. ELLIS

was called as a witness on behalf of the defendants, and being duly sworn, testified as follows:

DIRECT EXAMINATION

By Mr. Reed:

Q. Where do you live, Mr. Ellis?

A. Birmingham, Alabama.

Q. How long have you lived in Birmingham, Alabama?

A. Since August, 1908.

Q. Prior to August, 1908, where did you live?

A. My residence was Duluth, Minnesota.

Q. Duluth?

A. Duluth, Minnesota.

Q. How long had you lived there?

A. I had lived there since the 1st of January, 1906. I had made my headquarters there during a great part of the time.

Q. What was your occupation while you were in Duluth?

A. Assistant geologist with the Oliver Iron Mining Company.

Q. Assistant to Mr. Merriam?

A. Assistant to Mr. Merriam.

Q. Prior to January 1st, 1906, what was your residence?

A. Washington, D. C.

Q. And what was your occupation while you were in Washington?

A. I was in the Geological Survey, as geologic aide.

Q. In what bureau? Any particular bureau or department or branch?

A. The Department of the Interior, I believe, in the office of the Geological Survey.

Q. Have they not what they call the iron ore division?

A. Well, I was not in the iron ore division.

Q. Yours was general geologic work?

A. Yes.

Q. How long were you with the survey?

A. I did some work for them in 1903 and received an appointment with them in 1904, and resigned at the end of 1905.

Q. Have you made any special study of geology?

A. Yes, sir.

Q. At what place?

A. At Northwestern University I took undergraduate work, and at the University of Wisconsin I took postgraduate work.

Q. Postgraduate work in geology?

A. Yes.

Q. Since you went to Birmingham, in 1908, what has been your occupation?

A. I was geologist for approximately a year, and then was appointed as assistant manager of the land department, and my work throughout has been essentially that of——

Q. (Interposing) Essentially geological?

A. It has been essentially geological, with reference to the mineral value of lands and properties.

Q. With what company have you been associated since August, 1908?

A. The Tennessee Coal, Iron & Railroad Company.

Q. And you are still in that position, are you?

A. I am still there.

Q. Are you familiar with the deposits of iron ore in the Birmingham District of Alabama?

A. I am.

Q. Have you studied them?

A. I have.

Q. On the ground?

A. On the ground.

Q. Been in the mines?

A. Yes.

Q. Are you familiar with the results of the diamond drilling that has been done there at various places?

A. Quite familiar with it, yes, sir.

Q. Have you seen the records?

A. I have seen the records.

Q. Did you have anything to do with locating the points at which any of these holes have been put down?

A. Not of the iron.

Q. Not of the iron?

A. Not of the drilling for iron ore.

Q. You were there while that drilling was being done, were you?

A. Yes, sir.

Q. Are you familiar with the titles and ownership of the ore bodies in the Birmingham district?

A. Thoroughly familiar with them.

Q. Have you made a study of them?

A. I have.

Q. Are you familiar with the ownerships of the Tennessee Coal, Iron & Railroad Company?

A. Yes, sir.

Q. The Seminole Land Company is a subsidiary of the Tennessee Company, is it?

A. It is.

Q. Are you familiar with the ownerships of that company?
A. I am.

MR. REED: Will you mark this, please (handing map to stenographer).

(The map was thereupon marked "Defendants' Exhibit No. 107.")

By MR. REED:

Q. I show you Defendants' Exhibit No. 107, Mr. Ellis, and ask you what it is (handing map to witness).

A. It is a sheet on which is indicated a map giving certain information regarding ownerships, location of iron mines, and the limits taken in estimating ore tonnages. The sheet also carries a geological cross section showing the structure in this territory, and carries a diagram giving tonnages, acreages, and relative percentages of the ownership of each as between the Tennessee Coal, Iron & Railroad Company, and companies controlled by it, and operating furnace companies and independent interests.

Q. This exhibit No. 107 appears to contain two maps of the same region; is that correct, that it does?

A. The map indicates two areas.

Q. And this (indicating) and this, seem to be two maps of the same thing?

A. One diagram covers the same area as the other, and is placed on the map to indicate the distinction between two areas indicated as area No. 1 and area No. 2.

Q. Who made this map, Mr. Ellis?

A. I prepared the original, and this is a reproduction of the original, which I have checked.

Q. You say you made the original from which this was drawn by a draftsman?

A. Yes, sir.

Q. I call your attention to the map on the left of this exhibit No. 107, which shows different tracts within this large area in different colors, and ask you what is shown by that map? Does it show the difference in titles—ownerships?

A. There are three colors shown, which indicate different

ownerships. The pink indicates the ownership of independent interests; the brown indicates ownership of companies controlled by the Tennessee, Coal, Iron & Railroad Company—interests, I should say; the purple represents the ownership of operating furnace companies.

Q. Operating furnace companies, outside of the Tennessee Company?

A. Outside of the Tennessee Coal, Iron & Railroad Company.

Q. And the pink represents the holdings of individuals or companies that are not operating furnaces?

A. Yes, sir.

Q. Immediately to the right of that map I notice on this same exhibit the same tract, with the same outline laid out, with a yellow field. What is that intended to show, Mr. Ellis?

A. That is intended to show the same area as the map on the left, and was used for the purpose of bringing out more distinctly and clearly the distinction between area No. 1 and area No. 2, which includes or covers the same area as No. 1 and additional territory.

Q. Area No. 1, then, if I correctly understand the map, indicates all that lies between the red line on the left-hand side of these areas and the heavy black line which runs down the center of the area?

A. Yes.

Q. And area No. 2 includes all within the heavy lines, the whole area that is tinted on the map?

A. Yes; the whole area that is tinted and is contained within the limits of the outer heavy black line.

Q. Now, Mr. Ellis, what does the heavy red line indicate on the left-hand side of this district as shown on these two maps?

A. That indicates the outcrop of the red ore seam on Red Mountain, as closely as the scale of this map will permit it.

Q. And what is area No. 1?

A. Area No. 1 is the area which includes the available red ore reserves, the present available red ore reserves, as estimated by Mr. Burchard in Bulletin No. 400 of the United States Geological Survey.

Q. When was that published, or rather, when was the work done in Birmingham in preparation for that bulletin, if you know?

A. The work was done prior to 1911, but I cannot give the date of the bulletin. The bulletin itself will show that.

Q. Yes. What is area No. 2?

A. Area No. 2 is the area which I would consider as the Birmingham district, in which I have estimated a tonnage of red ore, and includes the territory within which I think a reasonably accurate estimate can be made.

Q. I want to get your reasons for limiting the district as you have done, and to get you to state to us what the effect would be on the percentage of the Tennessee Company if the district were increased in any direction. In the first place, the top of this map is north, is it not?

A. The top is north.

Q. If the line were extended or run out further to the west, what would the result be?

A. It would include territory which is non-ore-bearing.

Q. And there is no ore to the northwest of the outcrop of red ore, I mean?

A. Not in that territory.

Q. In that district?

A. No.

Q. That is your reason for limiting it there, is it?

A. Yes, sir.

Q. Why do you not run it further to the north than Morrow's Gap, which appears to be the northern or northeastern limit of the area?

A. Morrow's Gap marks the northeastern limit of the major portion of the actual mining operations of that district.

Q. There are some operating mines north of that, though, are there not, in Alabama?

A. Oh, yes.

Q. What would be the effect if this northeastern limit of your district were extended, in regard to the percentage of the Tennessee Company in the area? Would it be increased by further extension or would it be diminished by further extension?

A. The percentage of the Tennessee Company's ore property would be decidedly decreased by extending the area further to the north.

Q. So you stopped with the Alfretta mine No. 1, practically, did you not?

A. Practically, yes.

Q. That is right near Morrow's Gap?

A. Yes; about half a mile south.

Q. I notice that the district does not extend as far back from the outcrop at the upper end of this area as it does at the lower end. Why is that, Mr. Ellis? Why have you limited it so strictly?

A. At the lower end of the district I have information, derived from the results of a number of drill holes, which information is sufficient to extend the territory to the limits to which I have carried it. To the north, in the upper portion of the map, we have not that information of drill holes, and consequently I have been conservative and have included a much more limited territory in the estimate.

Q. What would be the effect on the Tennessee Company's percentage of extending the upper part of the area as far back from the outcrop as you have the lower part? Would it increase it or diminish it?

A. It would very decidedly diminish it.

Q. At the lower part of the map, at the point where the line is farthest from the outcrop, did you include the purchases of the ore lands of the Seminole Company?

A. I included a portion of the purchases of the Seminole. I have included such acreage purchased by the Seminole Land Company as I could reasonably assume had ore value.

Q. Does this district at its lower end, as you have defined it, include all of the drills?

A. Yes, all the drillings of which I have record. There are others south of that of which I have no information.

Q. I am speaking of those opposite this part of the outcrop, say between the Spaulding and Sloss mines.

A. Yes; that includes the area of the drills located in that territory.

Q. Now, if this southeastern boundary, or eastern

boundary of the district were run along Shade's Mountain, that is, so as to omit this district in which the Seminole company has been making purchases, what would be the effect on the Tennessee Company's percentage? Would it be increased materially or diminished?

A. It would not be materially changed; it would be slightly decreased, but probably only a fraction of a percentage change either way.

Q. So that by taking in this district where the Seminole Company has been buying it would not have materially altered the percentage?

A. Not materially altered the percentage.

Q. Now, I call your attention to the southern limit of this district as you have defined it. Is there any ore south of the south line of that district?

A. Yes, there is ore south of that line. It is shown on the outcrop, and various explorations have been conducted on it, and drilling is now going on back of the outcrop.

Q. Why did you exclude it then?

A. I had not sufficient knowledge on which to base any estimate.

Q. Do you know what the effect would be if that area had been extended to include that southern land, the effect on the Tennessee Company's percentage?

A. Assuming that that land carries ore in workable condition, it would materially lower the percentage of the Tennessee Company's holdings.

Q. Naturally if it did not include any ores it would not change the situation one way or the other, but you have omitted it because you have not detailed knowledge of it?

A. I have not enough knowledge of that territory to estimate it.

Q. At the present time, including these Seminole Land Company purchases, what percentage of the merchantable ore of this area No. 1 does the Tennessee Company control?

A. I have made no estimates of the tonnage in area No. 1 based on my information. I have made an estimate of the tonnage in area No. 1 in conjunction with Mr. Eckel, which is based entirely on assumptions in Bulletin No. 400, and I have

used Mr. Burchard's tonnage figure for that area, and by taking his basis or his scheme of calulation I have figured the relative percentages of ownership of the three types of interest indicated.

Q. That is to say, you have accepted the methods of figuring and the results of the United States Geological Survey in this Bulletin No. 400 for area No. 1, the total tonnage?

A. I have not necessarily accepted them, but I have used them.

Q. But you have used the same methods in calculating the tonnage of these three classes in that same district?

A. As used by Mr. Burchard.

Q. And on that basis of calculation what percentage of the ore in Area No. 1 does the Tennessee Company own or control?

A. Slightly less than 37 per cent.

Q. Does that area include any of these Seminole purchases?

A. It does not.

Q. Now, have you made a calculation of the tonnage in Area No. 2, and if so, when and how?

A. I made a calculation of the tonnage in Area No. 2——

MR. DICKINSON: (Interposing) That includes No. 1 too?

MR. REED: That includes the whole thing.

THE WITNESS: (Continuing) I made a calculation of the tonnage in Area No. 2 during September, 1913, and have based my calculations on the thicknesses of ore as indicated in mine workings and in outcrop of the red ore, and on the results shown by diamond drill holes which have been sunk in the valley.

By MR. REED:

Q. And of that Area No. 2, calculated in that way, what percentage does the Tennessee Company own and control?

A. 32.7 per cent. of the iron ore, estimated for the total area.

Q. Including the Seminole purchases?

A. Including the Seminole purchases, and the Potter Ore

Company, which is also a subsidiary—leased property rather.

Q. Do you know any better way of calculating tonnage than you have used in calculating this Area No. 2?

A. That is the best method I was able to arrive at after several years of work.

Q. Does it represent your best judgment of the tonnage of available ore there?

A. It certainly does.

Q. What is the total tonnage of ore in Area No. 2?

A. 1,387,945,000 tons.

Q. What tonnage does the Tennessee Company own or control in that district?

A. 454,000,000 tons. I can give it closer if you desire; it is given on the map.

Q. Yes, do so.

A. 454,180,000 as calculated.

Q. Of that tonnage how much is included for those Seminole Lands?

A. That includes approximately 58,500,000 tons.

Q. In the lands purchased by the Seminole Company?

A. Yes.

Q. When were those lands purchased?

A. During 1910 and the early part of 1911.

Q. What was the aggregate price paid for them?

A. Approximately $160,000.

Q. What is the fact as to the quality of the ore disclosed by these drillings farthest from the outcrop? Is it as good as the outcrop ore?

A. The metallic iron content in the holes which are farthest out is higher than the metallic content of the ore mined at present.

Q. That is, higher than the ore which is mined near the outcrop?

A. Yes, sir.

Q. How about the width of the vein in these most remote holes from the outcrop?

A. In the most remote holes there is no apparent change in the thickness as indicated on the outcrop ore.

Q. Well, how about the intermediate holes? What do they show as to quality and width?

A. The intermediate holes indicate in certain territories a possible increase in iron content away from the iron—away from the outcrop. In other parts of the territory they show no change whatever. They do tend to show some decrease in the thickness of the ore as you get away from the outcrop, and there is a general tendency throughout the territory in a southeasterly direction toward a decrease in the thickness of the ore.

Q. In the calculation of the ores at the extreme rear of this area furthest from the outcrop, have you assumed a thickness as much as was shown by these most remote holes, or have you assumed a diminishing thickness?

A. I have assumed a diminishing thickness there for the sake of conservatism.

Q. What would be the effect on the percentage of the Tennessee Company if you used a continued thickness the same as the outcrop?

A. The percentage of the Tennessee Company would show a decrease.

Q. Do you think you have made this map on a fair basis, Mr. Ellis?

A. Certainly on a conservative basis, and if it is not fair, it is unfair toward the Tennessee Company.

Q. Mr. Ellis, have you ever examined any of the ores of Newfoundland?

A. Yes, sir.

Q. When?

A. During the last year.

Q. Did you make a trip to Newfoundland for the purpose of examining those ores?

A. I did.

Q. With whom did you go?

A. Mr. Edwin C. Eckel.

Q. Whereabouts in Newfoundland do their most important ore bodies outcrop?

A. On Bell Island, which is an island in Conception Bay, in the southeastern portion of Newfoundland.

Q. Is that near to the town of St. Johns?

A. Within twenty miles.

Q. This Conception Bay is a bay of the ocean, is it?

A. Yes, it is an open bay on the Atlantic Ocean.

Q. And ocean vessels can land at this island, can they?

A. They can and do.

Q. There is deep water right to the island?

A. Yes, sir.

Q. Does the ore outcrop on the island itself?

A. Yes, sir.

Q. What is the nature of the Newfoundland deposit, Mr. Ellis? Is it sedimentary?

A. It is a bedded deposit of sedimentary origin.

Q. Does it resemble the Birmingham ores to any extent?

A. There is a very remarkable resemblance to the Birmingham ores.

Q. Is it of the same geological age?

A. Probably not; it is probably of a slightly older period.

Q. How does it contrast with the Birmingham ores in quality; in its iron content?

A. It has a higher metallic content than the Birmingham ores.

Q. Is the iron content of the Newfoundland ores fairly constant, or is it variable?

A. Fairly constant.

Q. About what does it run?

A. Between 51 and 52 per cent. metallic iron.

Q. As against about what metallic iron content in the Birmingham district, on the average?

A. As against 36 per cent.

Q. How about the thickness of the bed in which the ore lies in Newfoundland, as contrasted with the Birmingham district?

A. Well, there are three iron ore beds in Newfoundland, which are being worked, and the aggregate thickness is greater than that of the Birmingham ore.

Q. What is the thickness of those three beds—the average thickness of those three beds that are being worked in the Newfoundland deposits?

A. One bed, the lowest and the one called the Dominion, will average 15 feet in thickness of clean ore; the middle or Scotia bed will average eight feet in thickness, and occasionally has a small parting of foreign matter; and the upper bed will average about seven feet.

Q. What is the depth of these Newfoundland ore beds below the horizon?

A. It averages about eight degrees.

Q. Eight degrees?

A. Yes.

Q. Have they been followed under the ocean to any distance, or under Conception Bay?

A. They have been followed a considerable distance under the waters of Conception Bay.

Q. Have they been mined from under the Bay?

A. Yes, sir; they have. They were operating at the time I was there.

Q. What companies are operating there?

A. The Dominion Iron & Steel Company and the Nova Scotia Steel & Coal Company.

Q. How far have the Dominion Company's workings gone under the Bay?

A. Approximately 7,500 feet.

Q. Do you mean to say that they are mining 51 or 52 per cent. iron out of a 7,500 foot shaft?

A. Slope; yes, sir; 7,500 foot slope. It might be 7,300 or 7,000. I would not give that figure accurately.

Q. Which company is it that is doing this?

A. The Nova Scotia Steel & Coal Company.

Q. I think I asked you about the Dominion Company.

A. Then I misunderstood. The Dominion Company has no submarine workings at present.

Q. And it is this Nova Scotia Company which is mining to a depth of 7,500 feet?

A. Yes, sir. I would not give the exact figure at 7,500 feet. My recollection is it is between 7,300 and 7,400 feet. I gave it in round numbers.

Q. Have you been in those submarine workings?

A. Yes, sir.

Q. Clear to the face?

A. Yes, sir.

Q. Have you examined the ore bodies in the lowest workings?

A. I examined them and measured them.

Q. Were they being worked at the time?

A. They were.

Q. Was ore being raised from this 7,300 foot depth?

A. They were hoisting ore out of the slope the days I was there.

Q. Did you measure the ore at more than one place in these workings?

A. I made several measurements.

Q. Now, are these ores being worked on the island also?

A. Yes, sir.

Q. Where does the Dominion Company get its ore?

A. It is getting the bulk of its ore at present from the Dominion seam, largely from open quarries; partially from underground work.

Q. Is the nature of this deposit of ore such that an accurate estimate can be made of the quantity contained in any given area, such as a square mile or an acre?

A. I think it can. It is a very uniform ore in its composition and in its general character, and I think that for any given area an accurate estimate can be made of the possible yield of iron.

Q. Has this deposit been faulted to any considerable extent or to any important extent?

A. Well, there have been a number of minor faults found in driving the submarine slope of the Scotia Company, but they have not been serious hindrances in their mining operations.

Q. How does the thickness of the ore beds at these deep workings contrast with the thickness at the outcrop or near the surface?

A. It is decidedly thicker in the submarine slope.

Q. It gets thicker as it goes down, does it?

A. Yes.

Q. Where is this ore being shipped to, Mr. Ellis?

A. I was informed by the representatives of the companies as to the shipments of the ore, and I also examined the records of the American consul, and I also examined the records which are shown in the geological survey office of Newfoundland.

MR. DICKINSON: We object to any such evidence as that as secondary.

By MR. REED:

Q. Go ahead, Mr. Ellis. Did you examine any custom house records, too?

A. I did.

Q. Tell us where this ore was being shipped.

A. A portion of it was being shipped to England; a considerable portion of it was being shipped to Belgium; a large amount of it was going to Nova Scotia and Sydney, and another considerable portion of it was going to the United States, at Philadelphia.

MR. DICKINSON: For what year are you speaking now?

By MR. REED:

Q. You are speaking of 1912, or 1913, now?

A. I saw the records for the years 1911 and 1912.

MR. DICKINSON: But I mean as to the shipment to the United States. What period are you speaking of—1911?

THE WITNESS: The same periods. I saw the records prior to those dates, also, of shipments to the United States.

MR. DICKINSON: I do not know whether you catch my meaning. I mean, where you spoke of shipments to the United States what years did you see the records showing that?

THE WITNESS: 1911, and 1912, and, I think, for each year back to 1908.

By MR. REED:

Q. Do you know how long Newfoundland has been shipping ore to the United States?

A. I have not that information. That will be shown, however, in the records of the United States Geological Survey, the records of imports into this country.

Q. Did you ever assist to make up any of those annual reports?

A. I did not.

Q. Now, Mr. Ellis, did you make any estimate of the quantity of merchantable iron ore in that Conception Bay district within workable distance of Bell Island, or of the mainland?

A. I made two estimates which I considered as conservative and divided them into two classes; one which I considered as practically proven ore and which went to a distance of approximately two miles from shore. This area carried——

Mr. Dickinson: We object to that statement as to what the estimates were, as irrelevant.

By Mr. Reed:

Q. Now, go ahead, Mr. Ellis, please.

A. This area carried, according to my calculations, 1,000,000,000 tons of ore. Then I assumed a second area which included the first area and which would give a working radius from Bell Island of approximately five miles for slope work; and in this area I calculated a tonnage of 3,250,000,000 tons.

Q. What warrant had you for assuming that ore lying five miles from Bell Island could be recovered? Do you know any place in which submarine workings have gone to that distance?

A. No, sir. I assumed that it was recoverable from that distance—in the first place I made sufficient geological investigation on the surrounding territory to be sure that the ore was there; and from my knowledge of mining operations, general information and observation and experience in connection with mining operations, I think it is a reasonable assertion to say that slopes of that degree of inclination can be carried to a point five miles from the shore and recover ore economically.

Q. Does the fact that the ocean lies above this ore introduce any new mining problems?

A. None. They are mining coal in Nova Scotia under the sea, and in European countries they are mining under the ocean.

Q. They are mining under the ocean off the shore of Wales, are they not?

A. That is my understanding. I read it.

Q. Do you know how far they go there?

MR. DICKINSON: One moment. We except to that last answer as hearsay. The witness shows that he does not know.

By MR. REED:

Q. Now, will you answer my last question?

A. In Nova Scotia the coal mines are extended as far as two and a half miles from the shore. I cannot give any definite information as to conditions in Great Britain, but the conditions are in no way different from the conditions of ordinary slope operations underground at any point; and in Birmingham we have slopes which are three miles in length.

Q. You have slopes in Birmingham three miles in length?

A. In the coal mines, yes.

Q. Is there any difference in the engineering problem in an iron mine?

A. There is no difference. A ton of coal and a ton of iron weigh the same and both are hauled out by practically the same methods.

Q. How deep have your workings gone in the iron mines at Birmingham?

A. I cannot give exact figures on that, but we have several slopes down there half a mile, and some of them are 3,000 feet or further than that.

Q. Do you know how far the engineers of the Nova Scotia Company plan to mine this iron ore under Conception Bay?

MR. DICKINSON: That is excepted to as hearsay and incompetent.

By MR. REED:

Q. Will you answer the question, please?

A. The Nova Scotia Steel & Coal Company have taken up submarine claims which extend for a distance out, I should say, 12 miles from shore; at least they have something like eighty miles of what are called submarine claims; and they naturally would not take up those claims and make payments

on them annually, as they have to do, unless they intended to operate the ore under them.

Q. How do you know that they have taken up those claims?

A. I have seen the records; the official government records of St. Johns.

Q. Of the Bureau of Mines?

A. Yes, sir.

CROSS EXAMINATION

By Mr. Dickinson:

Q. You say they have taken up claims which extended up would be how far from the shore—extended vertically to the top of the sea—

Mr. Reed: You cannot go very far from the shore vertically, Judge.

Mr. Dickinson: But you can go from your hole vertically until you get out; I want to know how far out that would be from the shore—to point to which he says these claims were taken up.

The Witness: You mean the distance from the shore or the distance from the top of the water?

By Mr. Dickinson:

Q. You spoke of some claims having been taken up that you know of?

A. Yes.

Q. Where are those claims; are they taken up on the land?

A. They are spread out from the surface of Conception Bay, over the area occupied by Conception Bay.

Q. How far from shore?

A. As I say, I think they go out from shore ten or twelve miles.

Q. Ten or twelve miles. Who owns it out there, twelve miles from shore?

A. A number of different interests, but the Nova Scotia Steel & Coal Company own the principal titles.

Q. How did they get title?

A. From the Government of Newfoundland.

Q. Does the Government of Newfoundland own twelve miles out from shore?

A. They claim to own everything out there in mineral rights, and they are selling those rights.

Q. How far do they own across the Atlantic?

MR. REED: Conception Bay is a closed bay; you can not keep on going across the Atlantic. Have you finshed with Mr. Ellis?

MR. DICKINSON: No, we haven't started.

(Whereupon, an adjournment was taken until tomorrow, Thursday, October 9, 1913, at 10:30 o'clock a. m.)

NINETY-SECOND DAY.

EMPIRE BUILDING,
71 Broadway, New York City,

Thursday, October 9, 1913.

Before Special Examiner JOHN ARTHUR BROWN.

Present on behalf of the United States, MR. DICKINSON and MR. COLTON.

Present on behalf of the Defendants, MR. SEVERANCE, MR. BOLLING, MR. LINDABURY and MR. REED; also, on behalf of the Great Northern Iron Ore Interests, MR. CHESTER W. CUTHELL.

EDWIN E. ELLIS,

the witness under examination at the taking of the adjournment, resumed the stand.

CROSS EXAMINATION (Continued)

By MR. DICKINSON:

Q. What is your age, Mr. Ellis?

A. Thirty.

Q. You went to Alabama, as I understand, first in 1908?

A. Yes, sir.

Q. What part of 1908?

A. In August.

Q. This map that you have here and the estimates that appear on it and to which you have testified, speak as of what time (referring to Defendants' Exhibit No. 107).

A. As far as the holdings of the Tennessee Company are concerned, they speak as of January 1, 1912, and represent conditions which existed at that time. There has been some change, however, in the relative holdings of the independent furnace companies and independent interests since that time, which is indicated on the map; but I was not able to bring the map down to date, because of the reason that I did not know

the tonnages mined by outside companies since that date, and could not correct the estimates in accordance with them.

Q. And the map and the testimony you have given based on it do not speak as of any time anterior to January 1, 1912?

A. It would speak as of any time prior to November, 1911.

Q. What do you mean by any time prior to 1911?

A. It would speak as of that date, which was the approximate period of termination of the Seminole Land Company's purchases, and they are included in the estimate. As far as the holdings of the Tennessee Company are concerned, independently of the Seminole Land Company, that portion of the estimate referring to them would be as of January 1, 1911. Actually there would be little change for the period of three or four years before that time, except with reference to ore which had been mined.

Q. You mean out of that property?

A. Yes, sir.

Q. But your calculation of percentages, based on the showing on this map and the relative holdings of the Tennessee Company, including the property of the Seminole Land Company and the other company to which you referred, speak as of what time?

A. As of November 1, 1911. With reference to the relative percentages of the Tennessee Company, as I say, there have been since that date some changes in the other interests, in that certain independent interests' property has been bought by operating furnace companies, not the Tennessee Coal, Iron & Railroad Company.

Q. Then neither the map nor the testimony which you have given speaks as of any date prior to November 1, 1911?

A. That is correct.

Q. Mr. Ellis, take this tract of land included in Area No. 1, on the map which has been marked Defendant's Exhibit No. 107; what is the extreme distance from the line on the northeast to the line on the southwest?

A. Along the outcrop it is 26 miles.

Q. And the lower boundary line—what is the extreme distance of that from east to west?

A. You refer to the lower boundary line of tract No. 1?

Q. Yes.

A. In an east and west direction it would probably be between 6,500 and 7,000 feet.

Q. Take the northeastern boundary line. What would the distance of that be; its longest distance?

A. In an east and west direction?

Q. No; I want it as it lies. It lies from northwest to southeast.

A. The limiting boundary running northwest and southeast would be slightly over three-quarters of a mile, and a line parallel to that at the southwesterly extremity of this area would be approximately 6,000 feet in width.

Q. Take the point indicated by the Ishkooda mine, No. 12; now from the outcrop there in a line at right angles to the outcrop to this black dividing line, what is the distance approximately?

A. Slightly over one mile.

Q. Take at Spaulding Mine from the outcrop there and at right angles to the outcrop, what would be the distance to the black dividing line between Area No. 1 and Area No. 2?

A. Approximately one and one-quarter miles.

Q. Take the Dago mine and answer the same question in respect to that?

A. That is approximately one-half a mile.

Q. Now take Area No. 2, the distance there of that area from the northeastern boundary to the southeastern boundary is approximately the same as No. 1?

A. The average length would be slightly less than that of No. 1

Q. It would be slightly less?

A. Yes.

Q. Take the line at the top, from northwest to southeast. What is the length of that boundary line?

A. A little less than two miles.

Q. Now will you give the same distance with respect to that area that I asked in regard to the Ishkooda mine, No. 12, to the eastern boundary line of No. 2.

A. A little less than four and a half miles.

Q. Now answer the same question as to the Spaulding?

A. That is slightly less than four miles.

Q. The next is the Dago; will you answer the same question as to that?

A. One and one-quarter miles.

Q. I wish you would indicate from a paper here shown you, entitled "Statement showing property acquired by Seminole Land Company" on this map the situation of those properties of the Seminole Land Company.

MR. DICKINSON: Mr. Reed, would you object to his indicating that with a little black cross?

MR. REED: Not in the least, but I suggest that Mr. Ellis has a map which would show that separately.

THE WITNESS: I have a map showing that separately.

MR. DICKINSON: I think I would rather have that other map. It would take up less time. Can you send and get it?

(Here a map was produced by the witness and marked "Defendants' Exhibit 108.")

By MR. DICKINSON:

Q. Will you please indicate the locations of the holdings of the Seminole Land Company within the Area No. 2?

A. I do that by exhibiting herewith a map with the lands of the Seminole Land Company shown thereon in black bars.

Q. What do the pink colors indicate on that map?

A. That represents land which has been purchased by other interests than those connected with the Tennessee Coal, Iron & Railroad Company subsequent to January 1st, 1908.

Q. You mean purchases subsequent to January 1st, 1908?

A. Yes, or which have changed ownerships subsequent to January 1st, 1908.

Q. Is the Tennessee Company interested in any way in any corporation except the Seminole Land Company, which holds ore lands in that region? If so, what company or companies?

A. It is interested in the Potter Ore Company.

Q. You mentioned that yesterday?

A. Yes, sir.

Q. Are those all in which it is interested?

A. To the best of my knowledge.

Q. What interest has it in the Potter Ore Company?

A. The Potter Ore Company is owned jointly by the Republic Iron & Steel Company and the Tennessee Coal, Iron & Railroad Company, and the entire ownership of the Potter Ore Company was divided by an agreement into two working territories controlled by each company, and for which land they hold leases from the Potter Ore Company.

Q. Now, where are those lands of the Potter Ore Company, which were assigned in that agreement to the Tennessee Coal, Iron & Railroad Company, situated?

A. Part of them are south of Sadler's Gap, and part of them opposite Muscoda No. 1 and Muscoda No. 2 mines.

Q. Are they embraced within this area No. 1?

A. I believe that all of them are embraced within the area No. 1. There might be a small portion outside of the area No. 1. Yes, there are possibly 200 acres outside of area No. 1.

Q. Is it in area No. 2?

A. The balance of it is in area No. 2.

Q. What is the entire acreage of those properties which are controlled by the Tennessee Coal, Iron & Railroad Company?

A. Within the larger area?

Q. Yes.

A. 14,553 acres.

Q. When were they divided between the Republic and the Tennessee Companies?

A. I could not give you the date, Judge. That lease agreement has been in force for several years; probably six or seven years. It was prior to my first visit to Birmingham.

Q. Was it in force when the Tennessee Coal, Iron & Railroad Company's properties were acquired by the United States Steel Corporation?

A. I could not tell you.

Q. You have included, have you, these Potter ores in the percentage of the Tennessee Company in these calculations you have made, or not?

A. I have included that portion of the Potter ores which

are under lease to the Tennessee Coal, Iron & Railroad Company.

Q. I just want to understand you. I understood you to say that the holdings of that company had been divided up between the Republic and the Tennessee Companies?

A. Yes, sir.

Q. Now, you speak of "that portion which is under lease to the Tennessee Company." Is there any difference between the two? If so, what is it?

A. I stated that the property of the Potter Ore Company had been divided into two classes or into two portions, one portion being leased to the Tennessee Company and one portion being leased to the Republic Company, and I have included in the estimates of the Tennessee Company's ownership that portion which they have leased from the Potter Ore Company.

Q. I understand.

A. But I have not included the portion leased to the Republic Company.

Q. Was this divided according to acreage or according to tonnage, or how?

A. I will have to give you that information from hearsay, Judge.

Q. You do not know?

A. I do not know.

Q. I believe you have given the acreage controlled by the Tennessee Company?

A. Yes, sir.

MR. REED: What was divided according to tonnage or acreage?

THE WITNESS: I have not given the acreage of the Potter Ore Company controlled by the Tennessee Company; no, sir.

By MR. DICKINSON:

Q. Would you give that, please?

A. I would have to refer to memoranda which I have not here, to do it; I do not carry those figures in my mind.

Q. Can you give the estimated tonnage of the land of the Potter Ore Company?

A. I can give you an approximate——

Q. (Interposing) I mean of that portion of it included in the Tennessee Company's ownership.

A. It is approximately 27,000,000 tons.

Q. What relation does that bear to that part that was turned over to and which is controlled by the Republic Company?

A. My estimate that I made of that gave the Republic Company a little the better of the deal.

Q. That is to say, you think they have a little more than 27,000,000?

A. Yes, sir.

Q. How much more has the Republic than the Tennessee Coal, Iron & Railroad Company in tonnage, according to your estimate?

A. In the Potter ore lease?

Q. Yes.

A. My recollection is two or three million tons, but I cannot give those figures exactly. That is the best of my recollection.

Q. This estimate made by Mr. Burchard, in Bulletin No. 400, to which you refer, of the ore reserves in Area No. 1, speaks as of what time? You understand my question, do you not, when I say "speaks as of what time"?

A. Yes, sir.

Q. I do not mean when it was published, but I mean to what period does that estimate refer?

A. I do not know when Mr. Burchard completed his estimate, or to what date he carried his tonnage of ore mined which had to be subtracted from his totals to give the final result, so I cannot give you that date.

Q. He made estimates, did he, within that area which you have designated here as Area No. 1?

A. Yes, sir.

Q. But you do not know as of what period he made those estimates?

Mr. Reed: Would not the estimates speak for themselves?

Mr. Dickinson: But I am testing the witness' knowledge.

Mr. Reed: Very well.

THE WITNESS: He was down in that district during 1908 and 1909, and how long prior to the publication of that bulletin he made his estimate, I cannot say. I have no way of knowing.

By MR. DICKINSON:

Q. But you have taken his estimate of the available ore reserves within that area and accepted it in your testimony as of the present time?

A. I did not accept it in my testimony. I stated that I had followed his method of calculation and had used his figures in order to get a comparison within that particular area, of the relative holdings and tonnages of the Tennessee Company as compared with other operating furnace companies, and with independent interests.

Q. In order to have a comparison, you had to have certain elements. You had his as one element?

A. I used his elements exclusively in making that calculation.

Q. As of what time did this comparison speak?

A. As of the time that the estimate was made by Mr. Burchard.

Q. Then what time was that?

A. I could not give you the date, Judge. That was immaterial, as far as my purpose was concerned.

Q. In making this comparison as of that unknown date, what did you take as a basis for the other elements of the comparison? That is, what date did you take of the holdings of the Tennessee Company for this comparison?

A. I know that the holdings of the Tennessee Company within that territory had not changed subsequent to the period that Mr. Burchard made his estimate, and prior to the period that I made the comparison.

Q. Had there been no developments in that territory within that time, of ore?

A. There had been developments of ore, but there had been no change in the ownership of the Tennessee Coal, Iron & Railroad Company.

Q. Well, had the Tennessee Coal, Iron & Railroad Company, within that time, made any explorations and done any-

thing upon which any estimates had been made of its ore holdings in that region?

A. The Tennessee Company had conducted explorations, and we had data to make estimates, but our data was not available to Mr. Burchard and had no connection with this comparative estimate which I have made here.

Q. The data were available to you?

A. Yes, sir; and I made—

Q. Did you use them?

Mr. Reed: Let him finish, Judge.

The Witness: I made estimates, based on our own data, which are the estimates of Area No. 2. The estimates for Area No. 2 have absolutely no connection and no reference to the figures which are given for No. 1, which are Mr. Burchard's figures. My figures were made independently of his, and without regard to his calculations.

By Mr. Dickinson:

Q. As I understand it, Mr. Burchard made an estimate of the red ore reserves of the entire Area No. 1, as a whole, and did not assign any relative proportion to any particular owner; is that a fact?

A. No, sir; he did not.

Q. But you do, in estimating the percentage of Area No. 1?

A. Yes; I have taken his estimates and, using his basis of calculations, have, in addition to that, divided the tonnages as between the different interests represented.

Q. That is what I want to get at, Mr. Ellis. You took his estimate of the whole, as of whatever date it spoke?

A. Yes.

Q. Which date you cannot give?

A. Yes.

Q. But to get at the other features of your comparison, you took some data, did you not, showing the holdings of the Tennessee Company?

A. Yes, sir; I did.

Q. As of what time did that data speak, and where did you get the data and what data did you use?

A. The data which I used, showing the holdings of the

Tennessee Company, was data which was available in my office at all times, and which I constantly used, and I knew that subsequently to the time that Mr. Burchard made his estimate there had been no change in the ownership of the Tennessee Company in that territory, and accordingly I was perfectly safe in assuming that my estimates were proportionately fair.

Q. Mr. Burchard made no comparison?

A. Not to my knowledge.

Q. You did?

A. I did.

Q. One controlling element was the total of the content there in that region which Mr. Burchard had arrived at?

A. Yes, sir; but he had arrived at that by a series of calculations. He divided the outcrop, or the ore territory from Spark's Gap to Morrow's Gap into a number of mining subdivisions, to each of which he assigned certain ore thicknesses and certain widths from the outcrop; and then gave a series of units to work from, so that the estimate which I made, which was comparative, and as between different interests involved, could not be far out of the way. It was very close.

Q. Was your estimate based upon data arrived at by drills or explorations of the properties of the Tennessee Company, or did you just take acreage?

A. I took Mr. Burchard's data, for instance——

Q. We understand that, now——

MR. REED: Please let him finish his answers, Judge.

THE WITNESS: For instance, as I say, he divided the territory from Spark's Gap to Morrow's Gap, into several units. For each of these units he gave a distinct thickness of ore, a distinct width of ore territory, so that, having a given length and a given width it was easy to compute for that area what the acreage was; and his tonnage was given, of course, for that unit. Then, by dividing the acreage in that territory as between the different interests, you can arrive, for each of his units of territory, at a very close approximation of the relative tonnages of ores of the different interests involved.

By Mr. Dickinson:

Q. Is that what you did?

A. Yes, sir.

Q. What you did was to take the aggregate of the various units set down by Mr. Burchard, and then, within the territory embraced by those various units, you took the acreage of the Tennessee Company and the acreage of the independent companies, and you assumed a constant factor for them, and in that way arrived at the proportion of the Tennessee Company?

A. Exactly.

Q. Then it was not based upon any actual knowledge of yours as to the character of the ore holdings within those various units of the Tennessee Company, based upon any explorations by drills or entry or otherwise, but was purely an acreage calculation?

A. For the area No. 1 I tried to make a comparison, using the data as published in the United States Geological Survey, in order to arrive at that relative relationship of the Tennessee Company's holdings to other interests, but the bulletin, of course, did not give the ownership of the different interests involved.

Q. But, after all, it was an acreage comparison, assuming a constant quantity per acre, was it not—a constant average per acre?

Mr. Reed: If you will pardon an interruption, Judge, I think you have misunderstood the witness, and I know you do not want to.

Mr. Dickinson: No. I am trying to get just exactly what he did do.

Mr. Reed: He has said that Mr. Burchard assumed a different thickness in the different units.

Mr. Dickinson: I understand that.

Mr. Reed: I think probably you have understood him to say that he and Mr. Burchard too assumed a constant thickness of the vein throughout the whole of area No. 1.

Mr. Dickinson: No. I said in my former question, in the several units.

The Witness: It was a different thickness for each unit.

By Mr. Dickinson:

Q. But within these units your comparison was based purely upon acreage?

A. Yes, sir.

Q. And not upon any explorations or actual knowledge of the contents.

A. No.

Q. You stated that you had used his estimates, but I believe you stated something—I do not remember the exact language—to the effect that you had not accepted them. What do you mean by that?

A. I meant by that that in making the estimate which I used for the Area No. 2——

Q. I am speaking now of Area No. 1.

(By request, the stenographer repeated the pending question.)

Q. I am referring now to area No. 1.

A. I have made no estimate of area No. 1 based on my own data, and if I were making an estimate of that area, I would not use the basis of calculation which Mr. Burchard used; but, by using his method of calculation for purposes of comparison, and by taking these various units which are relatively small, the percentages of tonnages and of acreages which I have given in the comparative estimate for that area are very close to the facts——

Q. Very close to the facts?

A. That would be very close to the results that Mr. Burchard would have obtained if he had endeavored to divide the tonnage in that territory between the different interests as I did.

Q. You have been there constantly since 1908?

A. Yes.

Q. And you say you would have proceeded under a different method of comparison?

A. Yes.

Q. Do you know within those units actually the relative value of those lands all the way across from the outcrop to this eastern black line which defines Area No. 1?

A. Yes, I think I could give very close to the correct

figures to use for those units, but I would not, as I say, use his scheme. I developed a different scheme for estimating the tonnage.

Q. And you did not use that one in estimating this Area No. 1?

A. I do not believe I understood that last question.

(The pending question was repeated by the stenographer.)

THE WITNESS: I did not use my own method of estimating that area.

By MR. DICKINSON:

Q. Is it not a fact that various forties lying contiguous within those units vary very considerably in ore content?

A. No, they do not; they are very similar. Contiguous forties are very closely alike.

Q. Are there not some of them that do not have ore?

A. I do not think you will find a forty in that territory that hasn't got ore.

Q. Do you mean to say that all of the forties, within those several units taken by Mr. Burchard, to your knowledge are uniform in the content and character of ore?

A. You speak of knowledge. Of course I have not seen forties that have not been developed, but I have studied the situation very carefully and examined the mines along the outcrop and studied the character of the ore from point to point, and studied the results of the drill holes, and, based on that information and my general knowledge, I feel perfectly safe in saying that every forty embraced in that area is ore territory, unless it has been completely mined out, and I do not think there is a single forty that has been completely mined out.

Q. How many drill holes do you know of, of your own knowedge, on those independent properties indicated in pink that lie north of Township 17-18?

A. I have information as to one drill hole in that territory, opposite Gates City, which information is published in Bulletin No. 400, and that is the only data I have so far as drill holes are concerned in that territory that you just mentioned.

Q. Are all the explorations there made by drills, or some by entries?

A. There are a number of mines along the outcrop.

Q. I mean other than those which are operating mines.

A. The outcrop is exposed at a number of points outside of the mines themselves.

Q. But are there not a great many of those forties where the outcrop is not exposed, and where there have been no entries and where there have been no drill holes?

A. Yes, but that is just what I am being paid for, to be able to state what is probably on land when you cannot see it.

Q. If all the land in there had ore that was rich, it would not take an expert, would it? One man could go in and buy as well as another?

A. He could if he knew that was the case.

Q. Well, is that the case? Can a man go in there within Area No. 1 and just go it blind and buy one of those pink holdings and be sure that he has got as good ore as these operating mines have?

A. I didn't say that. When I made my answer you referred to contiguous forties.

Q. Well, I will ask that question. Is it not a matter of investigation and expert knowledge which is used as a criterion in purchasing lands as to which of them are considered worthy of purchase, and as to which some of them are considered not worthy of purchase in Area No. 1?

A. I would not say any of them are considered unworthy of purchase in Area No. 1. There have been purchases in recent years, practically the whole length of that territory, where the ownership is not in the hands of operating companies.

Q. Take this area here that I have described. How many pink forties are there? Just count them.

A. From where, the Helen Bess mine?

Q. No, from the top of the map, from Morrow's Gap, down to the township line, 17-18 south.

A. There are approximately 53 forties; there are some fractional forties, but there are approximately 53.

Q. Of those 53 forties, are any of them operating mines, and if so, how many?

A. There are in operation probably two of those forties, at the Kewanee mine. That is all the operation at present conducted on those particular red forties, but you will notice the majority of those are some distance from the outcrop.

Q. There are 51 red forties on which there is no operation, owned by independents?

A. Yes.

Q. And some of them are remote from the outcrop?

A. Yes.

Q. Of those 51 forties within that region, I believe you stated you had seen only one drill hole. Was that drill hole on any of those 51?

A. I did not say I had seen the drill hole; I said that that was published information.

Q. Then you know only one drill hole to be down within those 51 forties?

A. That drill hole is not within the 51; it is farther out from the outcrop.

Q. So that in those 51, you do not know any drill hole or any entry?

A. No, sir.

Q. You know of no explorations?

A. You asked about entries?

Q. What I meant was anything in the nature of exploration into the ground on those particular lands.

A. You asked me before as to mining now going on. Now, if you refer to past explorations, there are several on those forties.

Q. What do you mean by past explorations?

A. Explorations which have been conducted in the past and of which the openings are now visible.

Q. Have you examined them?

A. Yes.

Q. How many are there of those?

A. I would not like to say, but there have been two small mining operations included in that area which are not now operated, and there are other old workings in the nature of

quarry work, you might call it; but I could not state just where they were, but it is all along the outcrop.

Q. Now, in making your estimate of percentage, these independent holdings within the respective units were assigned a uniform average holding, were they not, of iron ore reserve, as compared with others within the same units?

A. You are referring to my comparative statement based on Mr. Burchard's figures?

Q. I am referring to the statement made first on Mr. Burchard's figures for each unit, and then your comparing the holdings of the Tennessee Company with others within those units. I am asking you if in doing that you did not assign to each one of those forties, within the units where there were Tennessee Company holdings, the same iron content per acre that you did to the Tennessee holdings?

A. Yes, I assigned to each acre in that particular unit the same ore tonnage.

MR. REED: The same as what?

THE WITNESS: As any other acre within that unit.

By MR. DICKINSON:

Q. Now, take Area No. 2. Has the Tennessee Coal, Iron & Railroad Company any ore holdings outside of this area designated as No. 2?

A. It has lands which carry red ore, and on which the red ore outcrops, but I have not considered the ore of such a thickness that I would care to estimate it as in reserves, and, moreover, there is a very much larger holding of other interests—a considerably larger holding of other interests of red ore land outside of this territory than there is of the Tennessee Company.

Q. Well, outside of this territory, how many acres of ore-bearing land, within, say, twenty miles of Birmingham, has the Tennessee Company?

A. You are referring to red ore?

Q. Yes.

MR. REED: Merchantable red ore or any red ore?

MR. DICKINSON: Well, I will ask further about that. Just say known as red ore lands.

THE WITNESS: They might have a thousand or two thousand acres which might be interpreted as being ore land, but it was all property in which I would give no estimate of reserves. We could not count on it as a future supply of ore at all.

By MR. DICKINSON:

Q. You say a thousand, or it may be two thousand?

A. Acres, which I say, under the ordinary acceptance of the term, would be classed as red ore land, in lieu of being able to give any better name to it. I hesitate to call it ore land myself.

Q. Where do those lands lie in respect to this area No. 2?

A. Some land lies south of it, along the outcrop of Red Mountain, and we have some at various points north of there, toward Trussville, and several tracts of scattered land in which there is known to be some ore, to the north. There might be in excess of two thousand acres. I would not say.

Q. Have you examined those lands—explored them yourself?

A. I have. I have examined quite a few of them.

Q. Have you examined all of them?

A. I have not examined all of them. They were gone over very thoroughly by Mr. Merriam in 1907 and 1908, in connection with Mr. Catlett, and their reports were such that I did not feel it necessary to put any further time or expense on it.

Q. Well, you really do not know much about those lands, do you?

A. Yes, sir.

Q. I mean of your own personal knowledge from examination?

A. I have been through enough of that territory to know that their conclusions were undoubtedly correct. I have been through a considerable portion of it.

Q. How much of this two thousand acres, assuming that it is two thousand acres, have you examined, and when did you examine it, and what was the method of examination that you used?

A. I have been over the outcrop and such exposures of the ore beds and portions of that acreage as I could see. I could not tell you what portion of it I have been over, because an outcrop a mile in length might apply to a good many hundred acres.

Q. You did not put down any drill holes?

A. No, sir.

Q. And you did not make any excavations; did not go back of the outcrop as it was shown in its natural state?

A. No, but there have been other people who have done that.

Q. But I am speaking of what you yourself have seen?

A. No, I did not do that. I have seen work done by other people.

Q. On this land?

A. On the land outside of Area No. 2, and I have had my geologists, who are continually employed in work of that character, go over various properties and various explorations in order to keep me informed as developments took place in the district.

Q. You say "work done by other people." What do you mean by work done by other people?

A. Mining and exploration work in the nature of pits.

Q. You mean you have seen the pits themselves?

A. Oh, yes.

Q. On this 2,000 acres of land?

A. Well, on land adjoining it.

Q. Land that belongs to other people, other than the Tennessee Coal, Iron & Railroad Company?

A. Yes, sir.

Q. But how many pits on the land of the Tennessee Coal, Iron & Railroad Company did you see?

A. I could not say, Judge. A pit is a rather indefinite term, and may refer to a small excavation; I have seen a number of them. I could say fifteen, and I might be wrong. I would not give any definite figure, but I have had reports from my men and have seen enough of the outlying territory to satisfy myself that the possibility of ore in this outlying

land is so small that we are not warranted in expending any money in trying it out in detail.

Q. You do not need it now, do you? Have you not enough open mines and enough ore lying nearer, of known quality, for all your operations?

A. We are amply supplying our furnace operations from our present mines.

Q. Can you not extend them?

A. Yes.

Q. And you really do not need now to open up those mines, do you, even if there were ore there?

A. You mean the outlying lands?

Q. I mean this 2,000 acres we have been talking about.

A. There is no necessity for opening it up.

Q. There is no pressing necessity now of knowing just what it is, so far as your operations are concerned?

A. Well, we know pretty well what it is.

Q. You know, based upon the kind of evidence you have stated?

A. It is good enough evidence——

Q. (Interposing.) To satisfy you?

A. To satisfy me, and to warrant the company in expending money or not expending money under similar conditions.

Q. Now, is it not a fact that it has transpired very frequently in the United States that lands have been thought not to be very valuable ore lands, but on further investigation have demonstrated that they were? Is not that notably so, for instance, in the State of Michigan?

A. It certainly is true as a general proposition, that if a person knew what property was before they bought it they certainly would not expend any money in exploration.

Q. That is not the point. Have there not been geological theories, or theories of experts as to iron lands not being rich or not being worth working, which were afterwards completely overturned by further development and which turned out to be valuable ore properties? Do you not know that now as a scientist to be true?

A. I do not recall any particular cases where anybody whom I would class as an expert has made such statements,

but as a general proposition I think it is true that land which is considered valueless may be valuable ore property in the next year.

Q. You know about the Gogebic district, do you?

A. Yes, sir; something about it.

Q. Do you not know that within the last few years there have been developments there which have revealed rich iron ores that geologists ten years ago did not know anything about?

A. No, sir; they did not know anything about them.

Q. They did not know anything about them?

A. A good many of them suspected their existence, but they did not know that they were there.

Q. But it has turned out now that they are there, in very large quantities, has it not?

A. Yes.

Q. Have you been yourself on the Gogebic range?

A. Yes, sir.

Q. Have you made any explorations there?

A. No, sir.

Q. When were you there last?

A. 1908; the early part of 1908.

Q. You have not been there since then?

A. No, sir.

Q. And these developments that have taken place there you know of in a general way by hearsay, do you?

A. Well, developments had taken place before that time.

Q. But since that time?

A. No, I know nothing about them.

Q. You know nothing about them except by hearsay?

A. No, sir.

Q. What standard did Mr. Burchard take in estimating what was available red ore reserves in Area No. 1?

A. I do not know what Mr. Burchard's standard was in making that statement—that estimate, calling it available ore reserves. I cannot imagine on what basis he put it.

Q. And you took his aggregate, made on a basis by him which you cannot imagine how it was made, as one of your

elements of comparison in getting the holdings of the Tennessee Company in that same area?

A. Just as a comparative statement, yes. I might state that Mr. Burchard's figures based on the information he had at that time were very well handled indeed, but he did not have the information which I have had in my possession.

Q. Then you, as a scientist, do not accept his conclusions as correct?

A. Certain of his conclusions I do not accept. I do not think in his report he states final conclusions.

Q. Well, it is largely a theoretical report, is it not?

A. A considerable portion of it is theoretical.

Q. In making his estimate, to what depth did he estimate the ore in reaching his aggregate as to the ore reserves in Area No. 1?

A. I do not think he had any particular depth in mind. Are you referring to distance from the outcrop or to depth from the surface?

Q. I am referring to depth from the surface.

A. I do not think he used any particular depth in arriving at those figures.

Q. Well, that would be an important consideration, would it not, in estimating the ore reserves in land?

A. It would not be as important a factor in the Birmingham district as it would be in other territories.

Q. Do all mines run exactly the same depth?

A. No, sir; there are a great many different depths reached by different mines.

Q. Then you must assume, for comparison, some depth, must you not, for estimating percentages?

Mr. Reed: Judge, if you will excuse me, I think I can clear that up with a suggestion. These veins pitch off at a very flat dip. They do not go straight down, as the Gogebic ores, and when you speak of "depth" I think Mr. Ellis does not understand what you mean.

By Mr. Dickinson:

Q. What did you understand me to mean by "depth?"

A. Depth from the surface of the ground to the ore; vertical depth.

Q. Now I will go back and ask you what thickness of ore vein he assumed in his calculation?

A. He had variable thicknesses for each unit.

Q. Does he give in his estimate, what they were for each unit?

A. Yes, sir.

Q. In your estimate did you assume the same thickness?

A. I took his figures.

Q. And you assumed the same thickness?

A. The same thickness and the same length in making the comparative estimates.

Q. Regardless of whether, in your judgment, it was fundamentally and scientifically wrong?

A. Yes; the estimate which I made was purely for purposes of comparison with Mr. Burchard's estimate, in order to ascertain on the basis of his figures what the relative percentages of the different holdings were.

Q. You do not mean to say that, as a matter of fact, it shows the relative percentages, but only what they would be on the basis of Mr. Burchard's assumption?

A. Yes, sir; that is the situation. I would like to add to that, Judge——

Q. Certainly, add anything you want. I want you to speak out your whole mind.

A. The relative percentages as actually existent within that territory of the Tennessee Company, furnace companies and independent interests, would not be far from the percentages as resulting from Mr. Burchard's estimates. The errors would balance up so well along the line that the relative percentages of a modified estimate based on present information would be about the same in relative percentage as that given.

Q. And you say that, notwithstanding the fact that as to these 51 forties within the territory I refer to, you know nothing about the explorations made by you or others as to the character of ore they contained?

A. No; but my general studies of the red ore, which is a

sedimentary deposit, a bedded deposit, and as I said, practically uniform in contiguous forties, is such that I feel perfectly safe in assuming those conditions.

Q. Is it not a fact that, taking the length and breadth of Area No. 1, there are forties there that have no ore reserve that would be merchantable ore?

A. I do not believe there is a forty there that has not what would be classed as merchantable ore on it from one end of that area to the other, unless it has been mined out.

Q. And uniform throughout each forty?

A. No; it is variable in thickness.

Q. In the forties?

A. Practically uniform throughout the forty.

Q. Then, Mr. Ellis, do I understand you to say that throughout this whole area every forty of land there has an ore reserve practically as rich as every other forty?

MR. REED: No, Judge, he did not say that.

THE WITNESS: I did not state that.

By MR. DICKINSON:

Q. I am asking just for information.

A. I did not state that.

Q. What did you state?

A. I stated that if you took any two contiguous forties, the reserves on the two forties would be practically the same, unless they have been mined out.

Q. But there are a great many contiguous forties between range 17 and 18 south and the north line of this map within that 51 you refer to that you do not know anything about the contents of, and in respect to which you know of no explorations.

A. I cannot state as to knowledge, Judge, but I can certainly state it as a matter of opinion, that every one of those 51 forties has got ore in it.

Q. What do you know, Mr. Ellis, of your own knowledge, if anything, about the southwest quarter of the northeast quarter of Section 7, Township 17 south, Range 1 west?

A. I know that the Irondale seam opposite that point has a thickness of approximately five feet, and that forty is only

a little over a quarter of a mile from the outcrop, and in mine developments throughout the Birmingham district on the Clinton iron ore seam there is no appreciable change within a distance of half a mile in the thickness or iron content of the seam of ore. The seam of ore is remarkably regular and uniform in adjacent territory; unusually so.

Q. Then, according to your idea, anywhere within this area No. 1 a man might as well shut his eyes and buy one forty as another, so far as iron content is concerned?

MR. REED: That is not what he said, Judge.

By MR. DICKINSON:

Q. That is the conclusion, I think, that it is fair to draw from what he did say. I want to ask him.

A. I doubt if you would find any appreciable change in iron content in the ores of that territory. As far as the working thickness of it is concerned, the working thickness varies from place to place. It is not the same thickness of ore from one end of the district to the other.

Q. Then you do not mean to say that all of these forties would have the same thickness of ore, even though they were contiguous?

A. If they are contiguous, yes, sir.

Q. It runs out somewhere, if it gets thinner, does it not?

A. Yes.

Q. If you took two contiguous forties and they were uniform, and then you take the next one that is contiguous and that is uniform, then there never would be any running out, would there?

A. Not if the statement were made as broad as that.

Q. How would you make it?

A. As a general proposition there are of course gradual changes; but the ore is so constant in individual territories, that if you take any particular two forties that are side by side, there might be a fraction of an inch difference in the average thickness of the two, or there might be more than that, but, as a broad, general proposition, you can say that two forties side by side have practically the same ore.

Q. Then the next one would have practically the same?

A. The next one would have practically the same.

Q. And then the next one to that one on the north would have practically the same, would it?

A. The change would be so slight that it would be hard to say that they were different; and yet there is a gradual change coming about. I am not saying that the whole district is uniform. In fact, I have just said it was not; but I said if you take any two particular forties they are practically the same.

Q. Well, that is what I want to get at.

A. You are taking two particular forties, and you are adding one more to that and then you are adding one more to that, and if you keep on adding, you will get a long way from home, if you keep on.

Q. But there would be a difference?

A. Yes.

Q. And you do not know where that difference would come in?

A. No, I cannot say where that would come in; you cannot lay down any broad lines.

Q. In regard to these mines along the outcrop, have any of them abandoned their entries, or are they still operating right straight on?

A. Some of them are operating and some of them have shut down.

Q. Have any of them abandoned entries because there was not paying ore?

A. The Tennessee Company has stopped its slopes within the last three or four years; certain slopes at certain times.

Q. Why?

A. Because the demand for ore was not so great.

Q. I am not speaking about demand for ore, but I ask whether or not there are any mines in that region that have abandoned any of their entries because they were not getting paying ore, and have gone and extended operations in other directions?

A. Paying ore is purely a matter of demand.

Q. What do you mean by that?

A. If you have got a demand for ore, the price will be sufficient to justify any cost. You may have two operators, one of them whose ore is costing 50 cents a ton, and another operator whose ore is costing one dollar a ton. Now, if the demand is sufficient, the man whose costs are twice that of the other can still mine and keep his operations continuing.

Q. Are there not mines there where entries have been abandoned because, on account of the ruling market price, it was not rich enough to compare with ore in other entries to justify operating them?

A. I do not believe there is a single mine in the district where that situation has taken place.

Q. So that you do not know any entry in that district which had been abandoned on account of the leanness of the ore?

A. No, sir; as compared with any other entry in the same mine.

Q. I am not comparing it with any other entry in the same mine, but in and of itself; where it has been abandoned because the vein became too thin, or in metallic content it was too lean and therefore the entry was abandoned.

A. I do not know of any such case. There are mines which are not active at present. As to their reasons for not being active, I cannot give them.

Q. If there are any such cases as that, you do not know of them?

A. I do not know of them.

Q. There may be?

A. There might be.

Q. Now, when you estimated area No. 2 and the tonnage of red ore, what did you assume there as the basis or standard for the merchantable ore included within your estimate?

MR. REED: You mean in iron content?

MR. DICKINSON: Yes, in iron content.

THE WITNESS: I took the territory within which mines are operating and have been operated, and I assumed that any ore which can be mined and sold is merchantable. I do not know of any other definition of the term, and that is the standard that I have used in making this estimate.

By Mr. Dickinson:

Q. What standard did you take?

A. I took, as I say, the approximate thickness of the ore on the outcrop, which is and has been worked at different points, and used that for the thickness at that point.

Mr. Reed: That was not the question. You were asked as to the percentage of iron content.

By Mr. Dickinson:

Q. In this Area No. 2, where you made comparative estimates, what was the standard of the iron content of ore that you took in making that?

A. I did not necessarily base it on any standard of iron content. I based it on the thickness of the ore which is being mined, and is consumed and used, which is a better standard than any other basis you can get.

Q. Then, in including ores that you estimated within this Area No. 2 in making your estimate, you did not have as a factor any standard of iron content above or below which you included or excluded ores?

A. I used the standard of ore which is being mined, which I class as merchantable ore.

Q. What was your standard?

A. It varies in different places.

Q. Just state what the various ones were that you used within this Area No. 2.

A. Ores are being mined which vary all the way from 31 or 32 per cent. in metallic content, and possibly lower, up to 43 or 44 of metallic content in that district. Now, whether it is 31 or 32 or 44, as long as it is being mined and being sold, I consider that as merchantable ore.

Q. Now, in estimating the tonnage within this Area No. 2, did you include everything above 31 of iron content?

A. No; there is additional ore to what I have figured in there.

Q. How?

A. There is additional ore to what I have given in the estimates, but it is in a part of the seam which is not being

mined at present, and has not been found commercially available.

Q. In the way which you estimated in the aggregate, and within which you estimated for the Tennessee Coal, Iron & Railroad Company, did you include anything below 31 per cent. of iron content?

A. Yes, I included in that some ore that ran 28 in iron content.

Q. How could you tell that?

A. It works in with the rest; it is mined with the rest of the seam.

Q. And you do not know how much was as low as 28?

A. A small portion of it.

Q. Where was that located?

A. Near the top of the seam at various points. We are mining to-day a great deal of ore—I would not say at 28—but we are mining a great deal of ore that runs down to 30 per cent. of metallic content. Down toward Potter I do not suppose the ore averages 33 of metallic content.

Q. How much of that 28 did you apply to this part of Area No. 2 which lies east of Area No. 1?

A. That is a difficult question to answer. In mining a given thickness of ore, in that particular thickness you might be mining ore of 30 per cent. iron metallic content, and 40 per cent. iron metallic content out of the same place, so that you cannot draw any discriminatory line. These ores are all mixed with each other in such a way that a mixture is obtained which is satisfactory to a furnace man.

Q. Do not some mines there run uniformly above 31 per cent.?

A. Yes, the average for the mine will run above 31 per cent., but you could pick out many pieces of ore in it that would run below 31.

Q. But you cannot give me any estimate of what percentage, if any, you applied to this entire area No. 2 in estimating the quality?

A. That is an impossibility.

Q. Nor the percentage you applied to the Tennessee holdings in giving the relative percentage of that to the whole?

A. I could not give that.

Q. Do those ores within Area No. 1 run richer or leaner as they go south?

A. As they go to the south. Down here at the south, well, I think the leanest ores are down at the south end of the district.

Q. Where are the richest ores within Area No. 2?

A. Are you referring to metallic iron content?

Q. Metallic iron content, yes.

A. That is a question that I do not know how to answer. Do you refer to the mine output or the ore as it is in the ground?

Q. What I refer to is this, Mr. Ellis; if anybody were to come to you there and say, "Mr. Ellis, in that part of the territory contiguous to Birmingham which is embraced on this map within the area shown as No. 2, which relatively is the richest section of country in iron content?"

A. The richest analysis that I have any record of is that published in Bulletin No. 400, of a drill hole opposite Gates City, where they got 51 per cent. of metallic content. That is the richest red ore I know of in that district.

Q. I am not speaking of any one isolated case, but what part of that territory in large acreage, as compared with the other part, is considered there in that country as being the better part?

A. In my opinion the richest part in iron that you would get would be the territory from Oxmoor to the northeast along Shade's Creek.

Q. How far up would that run?

A. I do not know how far that rich ore would run, but the drilling in this territory has indicated that the maximum iron metallic content, for the average ore, is the greatest in this territory up in here above Oxmoor, northeast of Oxmoor.

Q. What is the thickness of the ore on each side of Shade's Creek?

A. There is a drill hole in there—you are referring to the territory above Oxmoor?

Q. Yes.

A. There is a drill hole in there that shows a thickness of 22½ feet of ore.

Q. Have you put any drills down north of Oxmoor?

A. No, we have not put any in there; we have very little property north of there.

Q. Have you yourself examined any drill holes there?

A. I have not examined that drill hole.

Q. You do not know yourself about what it is, except from what others tell you?

A. The information came to me from outsiders, not from our own records.

Q. Did you answer how far this extended north?

A. I could not tell you; I do not know.

Q. You could not tell?

A. No.

Q. Do you know how far the ore runs down below the level of Shade's Creek?

A. About 1,800 feet.

Q. In estimating the available ore in these tonnages that you have given, what depth did you take?

MR. REED: Do you mean the distance back from the outcrop, Judge, or the thickness of the vein?

MR. DICKINSON: I mean the thickness of the vein.

THE WITNESS: What thickness did I take?

By MR. DICKINSON:

Q. Yes.

A. The minimum thickness which I used was four feet.

Q. Four feet?

A. Yes.

Q. What was the maximum?

A. 12 feet.

Q. 12 feet?

A. Yes.

Q. To how much of that territory did you apply the four feet, and to how much did you apply the twelve feet?

A. I should say that I applied four feet to a small percentage of the territory; possibly, between five and ten per cent.; and the twelve feet to probably not more than two per

cent. of the territory; maybe as high as four or five per cent.

Q. What did you apply then to the other per cent.?

A. Variable factors.

Q. Just state what they were.

A. The average for the whole territory would be about 8½ feet.

Q. And what acreage did you figure in Area No. 2?

MR. REED: That shows on the map, Judge.

THE WITNESS: That is 43,138 acres.

By MR. DICKINSON:

Q. The total?

A. Yes, that is the total there (indicating on map).

Q. Now, you gave the thickness as an average of what?

A. About 8½ feet.

Q. What depth of ore did you figure?

A. I have not taken any particular depth limiting it—limiting me.

MR. REED: I think the Judge means thickness again.

MR. DICKINSON: Oh, no.

By MR. DICKINSON:

Q. Now, not referring to vertical height, but in estimating this total tonnage, what thickness of ore did you take, and what length of deposit, whether it was vertical or slanting? Now, is that plain to you?

MR. REED: What distance back from the outcrop, I think, is the way he would express it.

By MR. DICKINSON:

Q. But is that plain to you now? Do you understand that?

MR. DICKINSON: Read the question to him.

THE WITNESS: I think I understand what you mean.

(The question was read by the reporter.)

By MR. DICKINSON:

Q. Now, do you understand me?

A. The average thickness which I took was about 8½ feet. The length of the deposit or average width from the outcrop

was based on my opinion as to where I could safely and reasonably draw the outer limit of my area in which I estimated ore. It was not based on any factor of definite distance from the outcrop. There was no reason to apply such a factor, as far as I could see.

Q. Did you apply then different factors to different portions?

A. Yes, sir.

Q. Or did you apply a uniform factor to the whole area?

A. That is indicated on the exhibit. For instance, at the north portion of Area No. 2 the width is an average of about a mile and a half. At the south part it has an average of somewhat less than five miles, showing that a variable factor was used in the area. Now, I might explain that all of the active operations at present conducted in this territory are from slopes near the outcrop, but that a shaft or inclined shaft is now being sunk at a distance of two and one-half miles from the outcrop.

Q. On whose land is that being sunk?

A. That is now, I believe, the property of the Standard Steel Company. They made a recent purchase of that property, according to published reports.

Q. What I would like you to explain is just exactly the mathematical and scientific method that you used in reaching your conclusions, and the elements that you used, or factors that you used in making this estimate of total tonnage. Now, will you explain that?

MR. REED: How many cubic feet to the ton would give you exactly what you want?

MR. DICKINSON: I want to know what he did. I do not want any particular thing, except to find out what he did.

THE WITNESS: The factors upon which my plan of estimate was based were many measurements in operating mines, amounting to between a thousand and two thousand; the results of forty to fifty drill holes, analyses, specific gravity tests, all of which led me to certain definite conclusions, and on those conclusions the estimates were based.

By Mr. Dickinson:

Q. What was the first mathematical problem that you solved, and what were the conditions of that, and how did you go about it?

A. The first mathematical calculation was to obtain the thickness to assign to any particular forty of land, and that was obtained by means of careful study and analysis of the data which I had, and to which I have just referred.

Q. In respect of how many particular forties did you make such investigation as you have described?

A. In respect to all of the forties included in Area No. 2.

Q. Do you mean to say that you took up each forty?

A. I made an estimate of the tonnage of each particular forty in that tract.

Q. Each particular forty in that tract?

A. Yes.

Q. Now, if you had a forty that was remote from the outcrop, and remote from any operation, and remote from any drill hole, and there was no forty next to it—contiguous to it—that had been operated or explored, what did you take as the basis for estimating that?

A. The fundamental basis upon which a figure of that sort was obtained was a map which I prepared, and which I might describe as a contour map of ore thicknesses. In other words, I drew a map with a series of lines on it, each line representing a definite thickness of ore. Where the map took me into territory upon which we had but little data, I gave that less and less value as I got more and more remote from my actual information.

Q. Now, was there any constant factor assumed for giving a less and less value, and what was the ratio or standard of that diminution?

A. There was no constant factor taken. It was a graphic scheme which determined its own factor. I find it difficult to describe the method.

Q. When you got to lands you did not know anything about, it was arbitrary, was it not; just a matter of judgment and guesswork?

A. It was arbitrary, but it is a system which checks up pretty well on itself.

Q. You do not mean to say it checks up by actual facts as to the content of that particular forty that had never been explored? How are you going to check it up?

A. It checks up pretty well with the result of the drilling that has been done since I made my original map.

Q. When did you make this original map upon which you base these calculations?

A. The first map was made in 1910.

Q. Did that cover all this Area No. 2?

A. It did not at that time cover area outside of the territory where the Tennessee Coal, Iron & Railroad Company's properties are chiefly located, as I had no interest in the outlying territory at that time.

Q. When did you make your map which embraced all of Area No. 2, if you ever made one of that character?

A. I made that within the past two months.

Q. Since you made that, how many of the estimates of those forties have been checked up on property outside of the Tennessee Company's property that you know of? What are those forties, and who owns them?

A. You are referring to the map made within the past two months?

Q. I understood you to say that your estimates had been verified by being checked up——

A. I said that my map had been verified, on which I base the calculations.

Q. Yes, but you said that your map as to the Tennessee Company was made in 1910?

A. Yes.

Q. And the other map was made within the last two months?

A. Yes.

Q. I want to know how much verification by exploration or otherwise had been made of independent holdings shown on that map made within the last two months.

A. There have been none made within the last two months.

Q. So when you said a verification by checking up, you do

not refer to any verification of independent holdings at all, do you?

A. I refer to the verification of the fundamental basis of the estimate, which was that contour map.

Q. But then that——

A. That checks up on my method.

Q. Oh, as to the method?

A. Yes.

Q. And that contour map was made of the Tennessee holdings in 1910?

A. Yes; it covered other holdings too, but it covered the area, as I said, where the Tennessee holdings are developed or located.

Q. But you made a map embracing the larger part of these independent holdings two months ago?

A. Yes; applying principles which I had established to my own satisfaction in that portion of the territory where we had thorough data to that portion where the data was less complete.

Q. Then there has been no checking up, so far as that is concerned, within the last two months?

A. There has been no checking up, so far as that is concerned, within the last two months, but the method which is found applicable to one part of a deposit which is of a fairly uniform and persistent character geologically, I think is applicable to another portion of the same one, where you have got certain factors to work with.

Q. The larger part of the Tennessee holdings embraced within Area No. 2 lie southwest of range 3 west, do they not?

A. Yes, sir. Your range 3 west is a north and south line, and the bulk of the holdings lie west of that range line.

Q. Yes. The other part of the independent holdings lie northeast of that, do they not, within Area No. 2?

MR. REED: They lie east of it, you mean, Judge. How can it be northeast of a line that runs due north?

MR. DICKINSON: I think it can be, still say that they lie east, then.

THE WITNESS: Yes.

By MR. DICKINSON:

Q. Are the ores east of Range 3 west out to the northern boundary of Area No. 2 of exactly the same character and richness, and do they lie exactly in the same way as those to the west of Range 3 west?

A. Those ores vary from place to place. Some of the ores are similar to some of the ores west of the line. I could not say that all of them are similar to all of the ores, because there are too many variations.

MR. REED: By independent, do you mean, Judge, those independent of any furnace companies——

MR. DICKINSON: Those shown in pink on this map.

By MR. DICKINSON:

Q. Does the Tennessee Coal, Iron & Railroad Company own any ore northeast of Morrow's Gap?

A. Yes, sir.

Q. How much?

A. I could not give you the figures.

Q. You have not estimated that one way or the other?

A. That is included in the territory that I spoke of in which the character of the ore is uncertain.

Q. In that 2,000 acres?

A. Yes.

(Whereupon a recess was taken until two o'clock p. m.)

AFTER RECESS.

EDWIN E. ELLIS,

the witness under examination at the taking of recess, resumed the stand.

CROSS EXAMINATION (Continued)

By MR. DICKINSON:

Q. Of the entire estimate for Area No. 2, what is the greatest vertical depth of ore from the surface of the ground included by you in your estimate?

A. I should say 2,500 feet.

Q. How much of that territory in No. 2 have you estimated to that depth, what proportion of it?

A. I would say that was the maximum depth, and the remainder of the territory is less than that.

Q. Well, how much in your estimate was based on a depth of 2,500 feet?

A. Possibly one per cent. The bulk of that would be in the property of the Seminole Land Company.

Q. Have there been any diamond drill holes put down upon the property of the Seminole Land Company?

A. No, but I have made a careful geological study of the formation and have worked the structure out in detail, and I know the geology, and I know that depth is about right.

Q. You say about one per cent. is of that depth?

A. Yes.

Q. What would be the average for that, the average depth for the whole area, if you know?

A. Between eight and nine hundred feet.

Q. How many drill holes do you know of within that area outside of Area No. 1 which have gone to a depth of 900 feet? You understand, outside of Area No. 1?

A. Yes, I understand; seven or eight. Some of them are so near the line in there that I could not state.

Q. Now those seven or eight, where are they located, on whose property?

A. One is located on the property of the Woodward Iron Company, one on the property of the Standard Steel Company, and one on the property of independent interests.

MR. REED: You mean individual interests, non-operating interests?

THE WITNESS: Non-operating interests, and the balance on property of the Tennessee Coal, Iron & Railroad Company.

By MR. DICKINSON:

Q. In this estimate how far back of the outcrop did you estimate the ore?

A. The maximum distance is about four and a half miles.

Q. That is to say, entirely across this area?

A. Yes.

Q. Did you do that entirely across this Area No. 2, northeast to southwest?

A. No, I have taken the lowest width in the northern portion of it.

Q. But I say, the width is shown entirely within the lines entirely across it?

A. Yes, all of the area between the red line and the outer heavy black line is included in the estimate.

Q. Now, which way, beginning at the outcrop, does that ore dip, in what direction?

A. It dips in a southeasterly direction.

Q. And how far are the developments extended from the openings on the outcrop in a southeasterly direction?

A. Approximately 3,000 feet.

Q. Is that the greatest distance that you know of?

A. I cannot tell positively as to that distance; I think we have one slope of about 3,300 feet, but it is approximately 3,000 feet. I cannot give that exactly.

Q. You are estimating that on the length of the incline?

A. On the length of the incline.

Q. And not measured from the outcrop straight across the surface of the earth?

A. That would be a horizontal projection of the slope, but there will be very little difference from the other; possibly in a length of 3,000 feet the horizontal projection might be 40 or 50 feet short of that.

Q. To what depth does that incline go when it gets to a thousand feet? I mean vertical depth?

A. I should say between 300 and 400 feet for every thousand feet of advance; on certain of the slopes they vary, the inclines of the slopes vary from 17 degrees up to 40 degrees. The average is about 22 degrees.

Q. Take it at 3,000 feet, then the bottom of the slope would be about 1,200 feet from the top?

A. I should say about; I do not believe it would be above 900 feet on the average.

Q. This territory where these slopes have gone in, which

you have in mind, from the bottom of those slopes straight up vertically is there iron all the way to the top?

A. No, it is a bed of a definite thickness, overlain by chert, limestone, sandstone and shale.

Q. Then when that would be prolonged to the eastern border of this area No. 2, if the slopes were of uniform grade, it would reach what depth?

A. Well, the slope is not of uniform grade. The measures flatten and the dip becomes much less as you get out further in the field. I might give you an illustration of that. A hole which was put down just below Oxmoor and practically three miles from the outcrop, struck the ore at a depth of 1,921 feet.

Q. You mean a drill hole?

A. A drill hole.

MR. DICKINSON: Read that answer.

(Answer read by the stenographer.)

By MR. DICKINSON:

Q. Three miles from the outcrop?

A. Yes.

Q. 1,921 feet?

A. Yes.

Q. Is that the only instance you know of a hole being put down three miles from the outcrop?

A. No, there is another one put down still farther from the outcrop.

Q. What depth does that give?

A. The depth of that was around 1,800 feet.

Q. Well, how many others as much as three miles from the outcrop do you know of your own knowledge?

A. Those are the only two that are that far from the outcrop.

MR. REED: Where is this other one?

THE WITNESS: That is in Section 19; the southeast of the southeast quarter of Section 19, in Township 19 South and Range 3 West.

By MR. DICKINSON:

Q. Then you have no physical evidences based upon any

demonstration of what exists beyond those drill holes? I mean, to the east of them.

A. I have no physical evidences, but my information is such as to satisfy me that the ore extends beyond that point.

Q. On what do you base that? What are your sources of information?

A. My general experience and knowledge of the district.

Q. And your actual knowledge of that distance is based on those two holes, is it?

A. Partially; only partially.

Q. What other actual knowledge have you with respect to the depth of the ore from the surface or the thickness of the ore as much as that distance from the outcrop?

A. I have the benefit of my geological experience and training, upon which, by using certain factors, I can estimate the depth very closely, and on a similar basis, on a basis of judgment, I am sure that the ore extends out that far.

Q. You do not need any diamond drills then for your exploration?

A. Diamond drills would be of assistance.

Q. Of assistance?

A. Yes, but on the basis of the information that I now have, I feel no hesitancy in carrying the limit to the point that I have.

Q. So far as your judgment is concerned it would be a useless expenditure, would it not?

A. Well, I do not think it is a necessary expenditure. I think that facts are always of value in confirming your judgment—one's judgment.

Q. Sometimes facts upset your judgment too, do they not?

A. They may.

Q. Well, have you ever had yours upset? Have all of your theories worked out right?

A. I cannot say that every theory I have ever had has worked out right, no; but so far as this proposition is concerned, I think it will work out very close to what I have estimated.

Q. But there has been no demonstration beyond what you have mentioned?

A. No, not beyond what I have mentioned.

Q. You say you included in this estimate of ore for the Tennessee Company a portion of the purchases of the Seminole Land Company. Where do those that were excluded lie?

A. They lie in a territory immediately east of the lands shown on the exhibit which was presented in this case this morning.

Q. Contiguous to them?

A. Yes, in the immediate contiguous territory. They are not consolidated; they are scattered.

Q. Are there any of them contiguous to those you have included?

A. Yes; there are.

Q. You included some as having ore, and excluded some that were contiguous as not having ore?

A. I had to draw the line somewhere. If I had carried that line to the east all the way along I would have made the percentage of the Tennessee Company so inordinately low as compared with the rest of the other people's holdings that I would have looked decidedly partial, I think.

Q. You had to put on the soft pedal then, did you?

A. I tried to put on the soft pedal, Judge, yes.

Q. Of those forties of the Seminole Land Company that you excluded, how many forties were there?

A. About 2,200 acres.

Q. Did all those 2,200 acres lie within this eastern black line of Area No. 2?

A. You asked me what I had excluded, did you not?

Q. Yes; excluded.

A. Those are east of that line.

Q. East of that line?

A. Yes. The 2,200 that I excluded are east of the line.

Q. And you did not exclude any that are west of the line?

A. No, sir.

Q. Those are all counted in?

A. Yes.

Q. Well, are any of them contiguous to this black line on the east?

A. Some of them are contiguous to it.

Q. And are any of them contiguous to any of those that are included?

A. Yes, sir. They are also contiguous to the property of other interests.

Q. How many drill holes have been put down in the territory within Area No. 2, that part of the territory within Area No. 2 bounded on the northeast by township line 18 south, on the east by the bordering black line, on the southwest by range No. 2 west, and on the northwest by the heavy red line?

A. There are no drill holes in that territory that I know of.

Q. What proportion of that territory is owned by non-operators, as you have designated them?

A. The greater portion of it.

Q. Has the Tennessee Coal, Iron & Railroad Company more than 100 acres in that?

A. About 110 acres. I would change that to 260 acres.

Q. That 260 acres lies contiguous, does it not, to range 2 west?

A. Yes, sir.

Q. How much within the same boundary is owned by operating companies as you have designated them?

A. Eighty acres.

Q. What actual knowledge have you, from demonstration made by diamond drillings or otherwise, of the character of ore lying within that territory I have designated and owned by what you have called independents?

A. I have the benefit of exposures in the outcrop, the mining operations in the outcrop, and the benefit of my knowledge of the conditions that govern the occurrence of the red ore seam in that territory.

Q. But I believe you say that there is no drill hole that you know of in that territory?

A. No.

Q. Are there any openings that you know of, other than the outcrop where two mines are in operation, the Kewanee and the Hedona?

A. There are no other openings there in the outcrop in that particular territory.

Q. To whom does the Kewanee mine belong?

A. I could not tell you. That is under operation, as I understand it, by the Standard Steel Company, but I cannot give you definite information. If so, it is under a lease.

Q. When were you last in that mine?

A. I think the last time I was there was about five or six weeks ago.

Q. How far did you go in it?

A. I went around the opening and into it, I suppose, 150 feet at that time.

Q. Were you ever in there before?

A. Yes, sir.

Q. How far is the greatest depth that you have been in there?

A. I was about to state that I reside very close to that mine, and see it quite frequently.

Q. Do you see the inside of it, or the outside, quite frequently?

A. I see operations outside.

Q. What you can see from walking by?

A. That is what I mean I see, when I say I see it frequently. That is what I mean.

Q. How far have you been—what is the greatest depth you have been in that mine along the line of operation?

A. I expect a couple of hundred feet. However, I have had my men in my employ go farther in the mine than that, and they have reported to me the conditions.

Q. Is a part of your estimate, then, based upon these reports?

A. No, sir; it is my own observation. Of course I have men who are making me reports from time to time, upon whose information I rely to a certain extent.

Q. You do not call that information your observation, do you?

A. No, sir, but when my observation coincides with their information, I feel pretty well satisfied that it is right.

Q. Then, in making these estimates, did you go upon your own observation or their information, or both?

A. I have used both; but it is upon the basis of my judgment.

Q. Your judgment of what they did, or your judgment of what you saw?

A. My judgment of the whole situation.

Q. The whole situation, based partly upon your observation and partly upon their report of facts?

A. Well, I would say that it was primarily on my own observation.

Q. And secondarily on their reports?

A. Yes, sir.

Q. Did their reports cover exactly the same investigation that your observation covered, or was it to some extent different?

A. That is a thing it is hard to say, Judge. When I have my men in the field doing work, I go over their work sufficiently often to check it up in such a manner that I know and am satisfied that their reports to me are essentially correct.

Q. What work did you have your men do and report to you about in respect to the Kewanee mine? When was it done and who did it?

A. It was made by one of my men by the name of Blair, as I recall it, about two or three years ago.

Q. How far had the entry gone, then, in the Kewanee mine?

A. I do not know how far the Kewanee mine is down.

Q. I am not speaking about now; I am speaking about then, when he reported.

A. Then I could not tell you how far it had gone.

Q. You cannot say, then, what extent his report covered so far as revealing the condition of the ore by exposure of operation is concerned?

A. No, sir; but I have been through our own mines sufficiently to know the general character of the ore and when I see a small portion of a mine like the Kewanee and see loaded ore cars coming out, and see them shipping away this

ore in the railroad cars, that is sufficient to satisfy me that that is an operating mine.

Q. What is your nearest operating mine to the Kewanee mine?

A. The Ishkooda No. 14.

Q. How far is that from it?

A. About five and a half miles.

Q. So you judge of the Kewanee mine by the operation of your own mine, the nearest one of which is five and a half miles off; is that it?

MR. REED: That is not what he said, Judge.

MR. DICKINSON: I thought he said that. If he did not, I would like to know what he did say.

THE WITNESS: To a certain extent. I am not particularly comparing that mine with the Ishkooda mine in particular.

By MR. DICKINSON:

Q. I understand.

A. But with the general operations in the territory.

Q. But I was asking you as to the character of ore in that mine as revealed by actual operation, and you said, I believe, that you had only been in about 150 feet.

A. Yes, but you can see about 22 feet of ore there exposed.

Q. At 150 feet?

A. You can see 22 feet of ore exposed in quite an area there.

Q. But you did not go any farther back than 150 feet?

A. No, sir. There is no reason to anticipate any change in that distance.

Q. Have you yourself made any operations nearer than within five miles of that?

A. We have had a surface operation at a mine which is nearer than that.

Q. Where is that?

A. Green Springs mine.

Q. How near was that?

A. About three miles.

Q. Is that mine being operated now?

A. No. It is a mine conducted purely for what is known as soft ore, which only occurs at the surface, and no attempt was made to do underground work at Green Springs mine to any extent.

Q. This surface ore mine at Green Springs did not give you much help, then, in determining the character of the underground mine at Kewanee, did it?

A. I would not say that Green Springs mine did in particular, but as an element in my general observation I would say that it did.

Q. How far would that operate to throw light, the two mines being different in character, as you have described, one being a surface ore purely and the other being one that you know has gone 150 feet into the ground.

A. They are both operative in the same ore, and the Kewanee mine has carried through operations still further, and they are making an underground mine of it.

Q. Was it the same kind of ore altogether?

A. Essentially the same kind of ore.

Q. You mean that the Kewanee mine ore, in general characteristics, what they are taking out now, is the same as the Green Springs mine ore was that you got near the surface?

A. No; the ore they are mining now is probably different from the ore at the Green Springs mine at the present.

Q. Take the Hedona mine, that is the only other mine in that territory that is in operation?

A. It is not in operation; it was not the last time I saw it.

Q. Were you ever in that mine?

A. That is surface operation.

Q. That is surface operation too?

A. Surface operation, like the Green Springs mine.

Q. So that in that entire territory that I have just described to you there was only one mine operating in it and you have been in that mine at 150 feet, and you have seen no drill hole in that entire territory. Is that correct?

A. That is correct; there is only one mine in operation. The others have been in the past, within that territory. The length of the outcrop within the particular territory you have defined is only about a mile and a half long, and in that there

is one mine in operation and one which has been, but the territory to which you refer, the observations in that particular territory, which is triangular, that is not based on the mile and a half of outcrop which cuts across the apex of the triangle, but it is based on observations over the maximum distance of that outcrop, which is over six miles.

Q. You measured over six miles on the eastern boundary line?

A. Yes.

Q. Are there any mines on that side in operation?

A. No, sir, but there are a couple of mines on the outcrop opposite it.

Q. On the outcrop opposite it what mines are there; just name them?

A. There is the Kewanee, the Hedona, the Valley View, the Green Springs and the Spaulding.

Q. We have talked of the Kewanee and the Hedona; how about the Valley View? Has that been operated?

A. That has been operated continuously, so far as I know, since I have been in Birmingham.

Q. Who does that belong to?

A. I believe that the Birmingham Ore and Mining Company is operating that, but I would not be certain as to the operators. The ore goes principally to the Holt furnace at Tuscaloosa, and it may be that the Holt Furnace Company owns it. It am not sure as to the ownership.

Q. At right angles to the outcrop, how far has the Valley View mine, to your knowledge, been operated, and to what depth?

A. I cannot give you that information; I don't know that depth.

Q. Have you ever been in there?

A. Yes.

Q. When were you last in there?

A. I do not think I have been in there since 1909.

Q. How far did you go in then?

A. A short distance, one hundred or two hundred feet.

Q. Now, as to the Spaulding mine, who owns that?

A. The Republic Iron & Steel Company.

Q. Is that in operation?

A. It was the last time I saw it, which was during the past summer.

Q. During last summer?

A. Yes.

Q. At right angles to the outcrop, how far back have those operations extended?

A. I have seen the mine maps of the Spaulding, and it goes out over a thousand feet, but as to the actual distance, I cannot give it.

Q. Well, say it goes 1,000 feet, how far would that 1,000 feet be from the nearest mine lying within that area that I have described to you a while ago?

A. About two miles.

Q. If that were projected at right angles to the outcrop, would it ever strike any territory within the area that I have described, and if so, where?

A. Yes, it would strike the line down in the southwestern portion of the territory which you mention.

Q. The extreme southwestern portion?

A. The extreme southwestern portion.

Q. It would strike one quarter section?

A. Depending on how far it went; it would strike more than that if it kept on going.

Q. Do you mean to say that starting in at the Spaulding mine and continuing the operation straight from the opening as designated there at right angles to the outcrop, if extended it would strike more than one quarter section within the area that I have previously described to you? If so, just state where?

A. I will state that the slope, to the best of my recollection is not at right angles to the outcrop.

Q. My question was if it were; then answer the question, and then I will ask about the slope.

A. If it were it would not hit the line in question.

Q. What recollection have you about that slope not being at right angles to the outcrop? Any distinct recollection?

A. I have passed there a good many times, and I can see the direction that the cars are coming out of the mines. I have

seen the slope, and I have a pretty distinct recollection as to the direction of it.

Q. And on the ground did you ever view it for the purpose of determining really which direction that slope was and put your judgment on it at the time?

A. That is a matter of general interest.

Q. Can you really say what direction that slope is from a line drawn along parallel with the outcrop?

A. It would go to the northward of the line drawn parallel to the outcrop.

Q. How far?

A. You mean the angle?

Q. Yes.

A. An angle possibly of ten or fifteen degrees, according to my recollection of it.

Q. Are you willing to say that you have a positive recollection that that entry there goes to the north at an angle of 15 degrees with the line of the outcrop?

A. I didn't state that, and I have no intention of stating it.

Q. What did you state?

A. I stated that to the best of my recollection the deviation between those two lines would be ten or fifteen degrees; it might be twenty and it might be eight. I cannot give you that information. I have not surveyed it and I have never surveyed a line there at right angles to the outcrop.

Q. Were you thinking of it when you were looking at it, as to what the variation was?

A. No, but I have a pretty distinct recollection now of how it looks.

Q. When were you last there?

A. I have been past there frequently. I have passed there probably half a dozen times within the last six months.

Q. When were you inside of the opening?

A. I haven't been inside of the opening for several years.

Q. Then your opinion is not based on what you saw several years ago, or is it based on what you saw recently, or which?

A. It is based on what I saw several years ago and what I saw recently.

Q. Do you have any distinct recollection as to the slope varying from a right angle to the outcrop, from your observations that you made there several years ago?

A. I certainly have.

Q. You have?

A. Yes.

Q. And that is confirmed by your observations passing along on the outside?

A. Yes.

Q. When you went there several years ago how far did you go in?

A. I have never been in that mine but a short distance.

Q. How far?

A. Put it at 200 feet.

Q. What year was that?

A. Several years ago, I cannot give you the exact date.

Q. As near as you can.

A. Between 1908 and the present time.

Q. And that is as near as you can give it, is it?

A. Yes.

Q. And although you cannot get any nearer to that as to the time, you have a distinct recollection, you say, that there was a departure from a right angle?

A. I might say that the tipple of that mine crosses the railroad tracks, so that anybody looking out of the car window in passing can see the situation practically every time they pass it.

Q. So you judge of the inclination of the entry inside by the situation of the tipple on the outside?

A. Not the inclination, but the direction of it.

Q. Well, the direction of it.

A. To a certain extent, in connection with previous observations.

Q. Mr. Ellis, where a tipple is on the outside and there is an entry to a mine, does every entry go off on a straight line from the opening of the tipple, or does it ever vary when it gets inside?

A. It may take various directions.

Q. It may take various directions?

A. Yes.

Q. Then there is no uniformity of result to be reached by merely looking at the tipple on the outside, is there?

A. No, sir; I would not base a general statement on a thing of that sort.

Q. Then how far do you base your answer upon looking at the tipple?

A. It would be a pretty hard thing to put that in percentages.

Q. The question was put to you in regard to the mining of the Nova Scotia Steel & Coal Company as follows:

"And it is this Nova Scotia Company which is mining to a depth of 7,500 feet?

"A. Yes, sir."

Do you mean the depth measured vertically or the length of the slope?

A. That is the length of the slope from the shore.

Q. That is what I understood, but I wanted to be sure.

A. Yes.

Q. On the next page is this question:

"Was ore being raised from this 7,300 foot depth?"

You mean the same thing; along the length of the slope?

A. Yes, sir.

Q. How long were you in Newfoundland on this trip up there?

A. I was up there about four weeks.

Q. Was it altogether a business trip?

A. Well, I combined a little pleasure with it, but I was there for business.

Q. You were there for business?

A. Yes, sir.

Q. What measurements did you make there with instruments and measuring lines, and what assistance did you have?

A. Mr. Eckel and myself made a number of measurements there with a steel tape.

Q. Well, how many did you make?

A. I expect 20 measurements; possibly 20 to 25 measurements, with a steel tape.

Q. And what was the combined distance of those 25 measurements?

A. The combined distance I would not want to say, Judge. Some of them were in one seam and some in another. Do you mean the average?

Q. No; I wanted to know just how much you measured; what the extreme length was of all those measurements put together.

A. Well, in that number of measurements there were thicknesses of from seven feet to twenty-three feet of ore.

Q. I did not ask you about that.

A. When you ask me what the combined result would be, it is a rather hard question to answer.

Q. You simply mean, then, you measured the ore?

A. Yes, sir.

Q. Is that what you mean?

A. Yes, sir.

Q. And all those measurements were the measurements of the ore in place, exposed?

A. Yes, measurements of the ore in place.

Q. And those were all the measurements you took?

A. Those were the only measurements that were taken with tape, but I will say this, that the ore on those outcrops is exposed for practically the full length of the outcrop by open quarry mining, so that in walking along, going past the outcrop, it would be easy to see whether there was any appreciable change in the thickness and so these tape measurements were checked continually by visual measurements.

Q. Or were the visual measurements checked by the tape? Which do you regard as the more reliable?

A. I regard the tape as the reliable measurements and the others as corroborative.

Q. Then which did you check up?

A. The tape measurements were the essential ones, together with information given by officials of the operating companies.

Q. Was that in conversation?

A. In conversation, and from maps and records which they had on file.

Q. And it is upon those measurements that you took in walking along, as you have described, and what these people told you, and the maps you examined, that you made your calculations?

A. Yes, sir; the measurements which I took were sufficient to corroborate the other evidence.

MR. DICKINSON: This is objected to as based in part upon hearsay, and upon documents not produced in evidence, and the information derived therefrom, as secondary and incompetent.

By MR. DICKINSON:

Q. Now, this billion tons of ore, did you analyze any of it?

A. I had some of it analyzed.

Q. There?

A. I took samples myself and carried them back to Birmingham and I had them analyzed by our chemist.

Q. How many samples did you take?

A. I took three combined samples; one of each seam.

Q. One of each seam?

A. Yes, sir.

Q. And from how many places did you take them?

A. They were taken from cars.

Q. From cars?

A. I mean out of the operations. They were not face samples.

Q. Not what?

A. Face samples.

Q. Not face samples?

A. No.

Q. Taken from the cars?

A. Yes, sir.

Q. And you had those analyzed?

A. Yes, sir.

MR. DICKINSON: That is all.

Q. Are there any mines being operated in Territory No. 2 east of Shade's Creek?

A. No; there are no mines in operation in that territory.

Q. Will the ore in there be reached by operations started in on this side or from the operations that are being carried along the red line which is the western border of Area No. 2?

A. I think all of that ore will be extracted through shafts sunk away from the outcrop.

Q. And over in the direction east of Shade's Creek?

A. Yes, sir.

REDIRECT EXAMINATION

By Mr. Reed:

Q. Mr. Ellis, I must have misunderstood your statement as to the length to which mining operations had gone under the sea there in Newfoundland, and I wish that you would tell us now the total distance from the opening of the slope at the surface down to the bottom of the workings, measured along the slope?

A. It is between 8,000 and 9,000 feet; probably 8,500 feet would be about correct for that.

Q. Then the 7,300 or 7,500 feet distance that you gave us yesterday is the length of that same slope which lies under the water?

A. Under the water at high water mark; and the correct distance is 7,374 feet.

Q. Then the balance, or about 1,000 feet, is within the shore line on the land?

A. Yes, sir.

Q. I see.

Mr. Ellis, a considerable amount of your cross examination seems to have been devoted to this additional 2,000 acres or thereabouts of ore bearing lands owned by the Tennessee Company outside of Area No. 2, which you say you did not take into consideration because of the thinness of the vein, or something of that sort. If this map were enlarged, and if area No. 2 were enlarged so as to take in that additional 2,000 acres, what would be the resultant effect upon the property ownership of the Tennessee Company in that enlarged district?

A. The proportionate ownership of the Tennessee Company would diminish very decidedly as that area was increased.

Q. What determined your selection of this area from Morrows' Gap to Spark's Gap?

A. It is the territory within which the main operating mines are contained, and it is the territory within which my information leads me to expect merchantable ore, and it is the territory which Mr. Burchard used in his bulletin No. 400 in making his estimate of the ores of the Birmingham district, and I think it is a reasonable area to take for that purpose.

Q. Some mention has been made of the fact that all of the forties that lie east of the range line 1, or range line 2—I do not remember which—have not been drilled or otherwise explored. Have all of the forties owned by the Tennessee Company been drilled or otherwise explored?

A. Only a small proportion of them have been actually explored by the Tennessee Company, and the forties in the territory you refer to, to the north, are no further from the outcrop, when we have definite information, than the forties of the Tennessee Company included in the estimate from our workings, and drill holes on their property.

Q. You have used the same assumption all through the district?

A. I have.

Q. Has the soundness of that assumption ever been proved or disproved by drilling or mining work throughout the Birmingham district?

A. It has been corroborated by development.

Q. I do not know that I have entirely understood your statement as to the showing of ownerships on Exhibit 107. Is this map up to date as far as showing the ownerships of the Tennessee Company and the other operating furnace companies are concerned?

A. That is as of date September, 1913.

Q. Does the Tennessee Company own anything in that area No. 2 that is not shown there in the appropriate color?

A. Every acre that they own is shown there, to the best of my knowledge.

Q. Some question was made in your cross examination about your putting the eastern limit of this district beyond the point to which drill holes had been put down. Would the Tennessee Company's percentage of ownership in Area No. 2 be increased or diminished by stopping at a point at which the drill records demonstrated the existence of ore?

A. There would be no material change in the relative percentages.

Q. But if you did stop at that point would you include any of those Seminole purchases?

A. I would not. Well, there might be one or two forties, but there would be practically nothing.

Q. Some question was asked as to the basis of calculation used by Mr. Burchard for the geological survey in Area No. 1. You stated that his results were substantially the same as your own. How can that be, if his methods of calculation were in places erroneous?

A. I did not state that his tonnage results were the same as my own. What was the question again?

Q. That question probably was not well framed. I will ask it again. In estimating the proportionate ownerships in Area No. 1 you have told us that you used Mr. Burchard's bases and methods of calculation, of which you yourself did not entirely approve, but which you used in order to conform to the geological survey methods shown in Bulletin No. 400. Now, I ask you whether the proportion of the Tennessee Company in that Area No. 1 would be materially increased or diminished by the adoption of these methods and bases of calculation which you yourself felt to be correct?

MR. DICKINSON: I object to that on the ground that he does not show what those bases are, and it calls for a mere conclusion of the witness, and as incompetent.

THE WITNESS: I think the percentages in either case would be practically the same, because the varying factors would apply to each particular tract.

By Mr. Reed:

Q. I do not know that I asked you how many different units or different districts Mr. Burchard used in that area.

A. As I recall it, he used 14.

Q. That is, he subdivided the district into 14 different units?

A. He subdivided the district into 14 different units along the outcrop.

Mr. Reed: I think that is all.

RE-CROSS EXAMINATION

By Mr. Dickinson:

Q. You were asked, if you extended this area so as to take in that 2,000 acres, as to the effect it would have on the proportion of ore owned by the Tennessee Company. Have you ever made any map showing such an extension?

A. Yes, I have made maps showing such an extension, and I have handled maps continually in my regular duties which show various ownerships of properties which cover the territory I had in mind.

Q. Did you make any investigations of these lands that would be included in that extension, and what shape would the extension take if you did?

A. The extension would be a very large and irregular one, and would cover land in which the Tennessee Company has a very small ownership as compared with other owners, and for that reason I stated that if the Tennessee Company's property in that territory contained workable ore, the property under the same conditions owned by other interests would also carry ore; and as the Tennessee Company's percentage of the area is so small, the percentage of ore would be correspondingly small.

Q. What investigations have you made in the way of drills or entries or otherwise upon the lands of those independents?

A. I have made no such investigations.

Q. That would be included?

A. I have made no such investigations.

Q. This is just simply a mere offhand estimate made by you, is it not?

A. No, sir; as I said before in my testimony, in the case of land underlaid by the red ore seam, land in the same locality can be considered, acre for acre, as carrying practically the same amount of ore, and therefore if in this additional territory to which you refer I assume that our land carries workable ore, I necessarily assume that adjoining land owned by other parties carries workable ore, and as the aggregate area of other land under said conditions is so much greater than the Tennessee Company, they undoubtedly would have a very much larger percentage, but I am fully familiar with our ownership in other localities and I know that it is a very small percentage of the area owned by other interests which have the same general condition.

Q. What investigations and determinations have you made upon lands owned by others outside of this territory, and when did you make them and who owns the land? Just give me the details.

A. We have——

Q. Not "we" but "I."

A. I have in my possession a map prepared by the United States Geological Survey which shows the areas of Clinton ore outcrops, and from my geological knowledge and by using those maps, I can tell what areas are underlain by the ore seam; and knowing the ownership of the Tennessee Company in those territories I made the statement that I did.

Q. And it has not been based upon actual investigations of yours over lands that would be included in this extended area?

A. I have been over the various tracts owned by the Tennessee Company and by other interests in that territory.

Q. I am not asking you about the Tennessee Company, but about the others.

A. I have been over other lands.

Q. What other lands have you been over that would be necessarily included in that extended area?

A. I will tell you. I have been over the territory controlled by Mr. Colonel Pinckard near Dudley, Alabama; I

have been over the territory opposite Woodstock, Alabama, where explorations have been conducted, and where drilling is now going on, according to information which has been furnished to me, and I have been over territory near Trussville and at other points which I have not in mind at present.

Q. This land of Colonel Pinckard—what are his initials?

A. I think they are W. P.

Q. When were you on his land?

A. I think in the fall of 1910.

Q. What was your object in going there?

A. I went down to see his ore and his property.

Q. How long were you there?

A. One day.

Q. How much land did you go over, how many acres?

A. I went over portions of several thousand acres.

Q. What proportion of several thousand acres did you go over in one day?

A. It would be hard to arrive at that.

Q. You cannot say?

A. No, sir.

Q. Are there any drill holes in it.

A. There was a drill working the day I was there.

Q. How far down had it gotten?

A. It hadn't gotten very far, and was not in ore.

Q. You did not base anything on that drill, then, did you?

A. No.

Q. And that was the only drill hole in all the Pinckard land that you know anything about?

A. I know of another drill hole which Colonel Pinckard told me about.

Q. All you know is what he told you about that?

A. Yes.

Q. Were there any others?

A. Those are the only two drill holes.

Q. Were there any operations on that land?

A. He had two slopes, neither of them in active operation at the time I was there.

Q. What else did you see that gave you an insight into the actual ore conditions there?

A. I saw one or two pits that he had along the outcrop; all my observations were on the outcrop of the ore down there, and were sufficient to know that he had ore on the property.

Q. Did you see any analysis of that ore?

A. I have seen analyses of it.

Q. Did you see it then, at that time?

A. I did not see it at that time.

Q. Do you know what it was?

A. No, I could not tell you as to that.

Q. Now, is that all the information you have, except what you have derived from maps and information from others as to that ore?

A. Yes, sir; I am not testifying as to the character or tonnage of that ore. I know that the red ore seam was present there; that is all.

Q. And you have no idea how much was in that?

A. I have an idea, but I have no definite knowledge.

Q. Well, have you enough knowledge to make any scientific statement on the subject, or any calculation that is worthy of acceptation?

A. Mr. Burchard, in his Bulletin No. 400, gives an estimate of the ore down there, which is a better estimate than I could make of the property with the small amount of information which I have.

Q. From what you know of the Pinckard land, would you risk your scientific reputation upon an estimate you could give of the ores in it?

A. No.

Q. How about that which you saw of the Woodstock? When were you there?

A. I was there about 1909.

Q. 1909?

A. Yes, sir.

Q. How long were you there?

A. Over the outcrop a very short time, but enough to

know that the Clinton formation is present there, and there is some ore.

Q. Did you see any drill holes there?

A. No, sir.

Q. Was there anything in operation there?

A. Not at that time.

Q. How much acreage was included in what you call the Woodstock properties?

A. The outcrop of the red ore seam continues along throughout that territory for several miles.

Q. In what you call the Woodstock——

A. (Interposing) I said opposite Woodstock. That is merely a point of designation.

Q. Oh, opposite Woodstock?

A. Yes.

Q. What properties were those?

A. I think those are mainly independent properties. There may be some independent furnace companies, like the Republic; and the Tennessee Company, I know, has a slight ownership in that section.

Q. What information did you obtain about those properties opposite Woodstock, other than what you have given?

A. I did not obtain any information about them.

Q. What information have you about them, based upon your own observation?

A. Merely that there is a seam of red ore there, of which I neither know the analysis nor the thickness.

Q. Nor the extent of it?

A. No.

Q. Would you risk your scientific reputation upon giving an estimate of the amount of ore down there?

A. I would not make any estimate of the amount of ore there, but I would make a general percentage statement, in this way, that out of a certain acreage there, if the Tennessee Company had a very small percentage, as I know it has, if the ore were there in that territory, that the percentage of the Tennessee Company's holding would not be any greater than the percentage of the ore area of the territory.

Q. And if the ores were the same, and compared acre per

acre, or territory per territory, would that be an element of it?

A. Yes, it would.

Q. But you do not know how that is?

A. Well, I have an opinion as to what it is, but I have no definite knowledge as to that section.

Q. Now, opposite Trussville, what land did you examine there?

A. I have been over certain of the outcrops there and have seen some small pits and exposures of the outcrop both on the property of the Tennessee Company and others, and have had reports from my subordinates on that territory.

Q. When were you first there?

A. In 1908.

Q. What acreage have you included in what you have said about Trussville, other than the acreage owned by the Tennessee Company?

A. I have not included any definite acreage, and I have no definite estimates.

Q. And you cannot make any estimates?

A. I have no basis on which to make any definite estimates.

MR. DICKINSON: That is all.

MR. REED: That is all, Mr. Ellis. Thank you.

The Defendants offer in evidence Defendants' Exhibit No. 107.

The Defendants offer in evidence Defendants' Exhibit No. 108. Those are two maps.

(The two maps referred to were thereupon marked "Defendants' Exhibit (Ellis) No. 107, October 9, 1913," and "Defendants' Exhibit (Ellis) No. 108, October 9, 1913," and will be found in the volume of exhibits.)

MR. DICKINSON: Those are objected to, and the testimony based upon them is objected to, on the ground that the data is so vague, and as shown by the witness on cross examination, he is not competent to speak of their accuracy as the basis for the estimates which he has given.

MR. REED: Judge, have you that Seminole Land Company statement, signed by Mr. Crawford?

MR. DICKINSON: Yes, here it is.

MR. REED: Will you mark that as an exhibit of the Defendants, please?

(The paper referred to, previously marked for identification as Government Exhibit No. 438, was thereupon marked "Defendants' Exhibit No. 109.")

MR. REED: Counsel for the defendants now produce a statement showing property acquired by the Seminole Land Company in Jefferson County, Alabama, formerly marked "Government Exhibit No. 438 for identification," and now marked also "Defendants' Exhibit No. 109," and state that this statement was produced on October 7 and submitted to counsel for the Government, as requested by them in the cross examination of Mr. George G. Crawford, and I would ask counsel if they expect to offer this statement in evidence?

MR. COLTON: It contains matters not included in the request, Mr. Reed.

By MR. REED:

Q. Mr. Ellis, have you seen this Exhibit No. 109 before this time?

A. I have.

Q. Have you gone over it?

A. I have gone over it.

Q. Carefully?

A. Carefully.

Q. Whose estimates of tonnage are these that are contained in this statement?

A. My estimates.

Q. Who did the figuring to show the average cost per acre of this land?

A. A subordinate in my office.

Q. Have you checked his figures?

A. I have.

Q. Who figured the average cost per ton of ore in the ground?

A. I did.

Q. Are those figures correct?

A. They are, to the best of my knowledge.

MR. REED: That is all, Mr. Ellis.

MR. DICKINSON: You are offering it, then, are you?

MR. REED: I am not going to offer it, Judge, until you decide whether you are going to offer it.

MR. DICKINSON: Very well.

MR. REED: I can offer it later if I wish.

RUKARD HURD

was called as a witness on behalf of the Defendants, and being first duly sworn, testified as follows:

DIRECT EXAMINATION

By MR. REED:

Q. Where do you live, Mr. Hurd?

A. St. Paul, Minnesota.

Q. How long have you lived in St. Paul?

A. Twenty-odd years; twenty-five years.

Q. Do you hold any official position with the Tax Commission of the State of Minnesota?

A. I am secretary of the Tax Commission.

Q. How long have you been secretary of the Minnesota Tax Commission?

A. Since its organization, April 27, 1907.

Q. You were the first secretary of that commission, were you?

A. Yes, sir.

Q. In whose custody are the records showing the assessments and assessed tonnages of ore in the mining properties in the State of Minnesota?

A. In my possession.

Q. In your possession as secretary of that commission?

A. As secretary of the commission.

Q. Where are such records now?

A. In the State Capitol.

Q. At St. Paul?

A. In the office of the tax commissioner in the State Capitol at St. Paul, Minnesota.

Q. Has the tax commission made assessments of mining property in the State of Minnesota?

A. Yes, sir.

Q. In what year was the first assessment made?

A. In 1907.

Q. And have assessments been made annually since that time?

A. Every year since.

Q. How often are the reports of the tax commission published?

A. Every two years.

Q. When was the last report published?

A. In 1912.

Q. I show you Defendants' Exhibit No. 105 and ask you to state what that is?

A. I identify that as a report, the third biennial report of the Minnesota Tax Commission to the Governor and Legislature of the State of Minnesota.

Q. In what year was that report made?

A. In 1912.

Q. What was the original basis for the assessments of tonnage and valuation of iron ore in the ground in Minnesota? That is, did you require reports from the various mining companies and owners of iron ore?

A. You mean, to arrive at the original tonnage estimate?

Q. Yes.

A. Yes.

Q. Has the commission taken any steps to measure the ores by their own agents, by agents of the State, or to verify or calculate or establish the ore tonnages?

A. Yes.

Q. Through what agency has that been done?

A. Through the School of Mines of the University of Minnesota.

Q. And when did the commission commence to use and get the assistance of the School of Mines?

A. In 1909.

Q. And has it continued to do so each year since then?

A. Ever since. They are working constantly on it.

Q. Are the owners of mining properties required to make annual reports to you as well?

A. They make no reports to them; to us they do; to the commission.

Q. They report directly to you?

A. We furnish our mining engineers with credentials, and the operating companies give them blue prints, mine maps, and all the data they want, on our order.

Q. But the reports are made directly to you?

A. Directly to us.

Q. Have you taken any abstract of the tonnages shown in the 1912 assessments of the individual properties of iron ore in the State of Minnesota?

A. Abstracts of the total?

Q. Any abstract of the items which went to make up the total tonnages.

A. I have.

Q. From what records did you take such abstract?

A. From the official public records of the Minnesota Tax Commission.

Q. As kept in the office at St. Paul?

A. Yes; as recorded with the commission and kept in the office at St. Paul.

(Here a paper was marked Defendants' Exhibit No. 110.)

By Mr. Reed:

Q. I show you Defendants' Exhibit No. 110, Mr. Hurd, and I ask you whether that statement was prepared by you?

A. By me, compared by me, calculated by me and added by me; I did the whole work.

Q. You did all the figuring then?

A. Absolutely.

Q. What was the source of information stated on that Exhibit No. 110?

A. Records with the Minnesota Tax Commission of the developed, measured and merchantable iron ore of the Mesabi and Vermillion ranges in Minnesota for the assessment of 1912, together with its ownership or control.

Q. I want to ask you about your action in dividing the

tonnage owned by the Biwabik Mining Company; that was done at our suggestion, or the suggestion of counsel, was it not?

A. Yes.

Q. At the suggestion of counsel for the Steel Corporation?

A. Yes.

Q. On the method of division that we suggested the figures are correct, are they?

A. They are correct; they are recorded with the tax commission, your ownership there.

Q. Is that true also as to the Mahoning?

A. That is true as to the Mahoning.

Q. There counsel for the United States Steel Corporation have suggested that in preparing this Exhibit 110 you charge the Steel Corporation with 20 per cent. of the Mahoning ore.

A. Which is carried under item 47.

Q. Is that correct? Have counsel so suggested?

A. Yes.

Q. And have you done so?

A. I have done so.

Q. And on that method of division, as to the propriety of which I shall not ask you to speak, the figures are correct?

A. They are correct.

Q. And according to the records of your Commission?

A. Yes.

Q. Is that also true as to the ores of the Union mine?

A. The Union mine.

Q. You applied the same method there, did you?

A. The same method.

Q. At the suggestion of counsel?

A. Yes.

Q. Now, when we come to the ores of the Great Northern Iron Ore Companies, I see that your statement includes in those properties 18,977,777 tons to be surrendered by the Great Western Mining Company, which is a subsidiary of the United States Steel Corporation, is it not?

A. Yes.

MR. COLTON: I do not understand that counsel for the Steel Corporation has introduced this estimate of Great Northern

ore as showing ownership, by this witness, of the amount of ore set forth by the Great Northern ore interests.

MR. REED: Ownership by this witness?

MR. COLTON: What I mean is that I understand counsel is not here attempting to prove ownership or control of the property at that time by the Great Northern Ore Company?

MR. REED: Not at all.

By MR. REED:

Q. You are not a lawyer?

A. I am not a lawyer.

Q. Of course, you do not want to give us any opinion as to whether or not the Steel Corporation controlled the Great Northern ores included within the Hill lease or any part of them on January 1, 1912. You are not undertaking to do that?

A. I am not a lawyer and cannot define the meaning of the word "control." It is up to you lawyers to settle as to where the Great Northern tonnages belong. There is a statement of the tonnages.

Q. You are giving us a correct statement of the tonnages as calculated by your commission?

A. As calculated.

Q. Now, does this total of Great Northern tonnage, 235,416,756 tons, include the 18,977,777 mentioned in the parenthesis just below it?

A. It does include that amount.

Q. Then am I correct in understanding that this total of 235,000,000-odd which you assign to the Great Northern Iron Ore Companies includes the tonnage in all of the inactive properties, as they have been called, which were surrendered to the Great Northern Trustees in March, 1912, as well as the excess over the minimums which the Oliver Company has paid for and must pay for up to January 1st, 1913?

A. It does.

MR. COLTON: Just a moment there. Of course, you are not proving by this witness anything as to what minimums there are to be surrendered, or not?

MR. REED: No, sir; not yet, anyway.

By Mr. Reed:

Q. Then what tonnage from the Great Northern properties did you in this statement ascribe to the United States Steel Corporation?

A. We excluded the Great Northern ore in excess of minimum requirements, which are 18,897,674 tons.

Q. Now how did you arrive at that figure of minimum requirements?

A. The minimum requirements that are on file with the commission. Here they are. I will give them to you.

Q. Give us the estimates as on file with the commission.

A. Hadn't I better give you this prepaid tonnage first?

Q. Yes.

A. Which is, during the period of 1907 to 1911, inclusive, 3,147,674 tons. Now the minimum: For 1912, 4,500,000; for 1913, 5,250,000; for 1914, 6,000,000. Total, 18,897,674 tons.

Q. Now, Mr. Hurd, are these figures as to minimums on file in the office of the tax commission?

A. They are; they are a matter of public record and common knowledge.

Q. Do these figures which appear on this Defendants' Exhibit No. 110 include both the Mesabi and Vermillion ranges?

A. They do.

Q. And are those ranges separated according to the records of your Tax Commission in the footnote on this statement?

A. They are.

Q. Are there any figures on this statement which are not correct, according to the records of the Tax Commission assessments, for 1912?

A. They are absolutely correct. You have the 1912 report, and they may be verified.

Q. Of course, we understand that you are not expressing any opinion or judgment as to where the Great Northern tonnages included within the Hill lease or any part of them are to be placed?

A. I have already stated that is up to you lawyers.

Q. And all you vouch for is the accuracy of the figures stated here?

A. The accuracy of the figures, yes.

CROSS EXAMINATION

By Mr. Colton:

Q. Just as a matter of convenience, Mr. Hurd, I would like to ask you to state for me if it is not a fact if we include the Great Northern tonnage included within the Hill lease within the Steel Corporation's tonnage, that the total percentage which the Steel Corporation has of the assessed tonnage of the State of Minnesota as set forth on this exhibit in both ranges will be something over 78 per cent?

A. 78.55 per cent.

Q. And that includes all the iron ore in the State of Minnesota that you tax as merchantable iron ore?

A. Yes, and if that tonnage is to be charged to the independents——

Q. (Interposing) Then the figure is——

A. The proportion is 61.85 per cent.

Mr. Colton: That is all.

Mr. Reed: That is all, Mr. Hurd.

The Defendants offer in evidence Exhibit No. 110.

(The statement referred to was thereupon marked "Defendants' Exhibit (Hurd) No. 110, October 9, 1913," and will be found in the volume of exhibits.)

Mr. Dickinson: I will make a statement now, Mr. Reed, about this other exhibit. The plaintiff called upon the witness George Gordon Crawford, as shown on pages 6176 and 6177, transcript of record, volume 15, for a statement of what iron ore properties the Seminole Land Company had acquired, when they were acquired and where they were located. The paper presented, in compliance with this request, marked Government Exhibit No. 438 for identification, not only stated what iron ore properties had been acquired, when they were acquired, and where they were located, but also went further and gave statements as to the cost per acre and estimated tonnage, which were not called for by the Government. Since this paper was presented, the witness, Mr. Ellis, has located upon Defendants' Exhibit 108 the lands of the Seminole Land Company—the lands that were acquired by the Seminole Land Company, and in view of this fact and also the fact that said

paper gives statements not called for, the Government declines to put it in evidence.

MR. REED: We call the attention of counsel for the Government to the record on page 6176, where Mr. Crawford was asked to state what iron ore properties they—the Seminole Land Company—acquired, when they acquired them, and where they were located.

MR. DICKINSON: I just read that.

MR. REED: And on page 6177, where the aggregate of all the purchases was asked.

MR. DICKINSON: I just referred to that. If you want to put that in, you may do so, and I will except to that portion.

MR. REED: The complainant having refused to offer said exhibit in evidence, the Defendants now offer the same; that is, as Defendants' Exhibit No. 109, or Government Exhibit for identification No. 438.

MR. DICKINSON: The plaintiff excepts to so much thereof as sets forth the cost of the land in question and the estimated tonnage of red ore contained in same, as being incompetent and as a mere estimate based upon data, the original of which are not produced, and, therefore, as being secondary evidence.

(The statement referred to, previously marked for identification as Government Exhibit No. 438, was thereupon marked "Defendants' Exhibit (Ellis) No. 109, October 9, 1913," and will be found in the Volume of Exhibits.)

MR. REED: Mr. Eckel, will you be sworn?

EDWIN C. ECKEL

was called as a witness on behalf of the Defendants, and being first duly sworn, testified as follows:

DIRECT EXAMINATION

By MR. REED:

Q. Mr. Eckel, where do you live?

A. In Washington, D. C.

Q. How long have you lived in Washington?

A. Since 1902.

Q. What is your occupation at the present time?

A. Geologist, engaged in private practice.

Q. Where did you first study geology, Mr. Eckel?

A. I entered the engineering school of New York University in 1891, and graduated in 1895. After that I took a year's post graduate work in engineering and geology. During my undergraduate engineering course, of course, I had to do work in geology.

Q. That brings you up to about the year 1896, does it not?

A. Yes.

Q. How did you then spend the next two or three years?

A. The next three years were spent in general engineering practice, including surveying, earth and rock excavation, and masonry construction. In 1899 I joined the New York State Geological Survey, and from 1899 until 1902 was Assistant State Geologist of New York.

Q. In 1902 what official position, if any, did you take?

A. In 1901 I had been appointed Assistant Geologist in the United States Geological Survey, and during part of that year had worked for the Federal Survey. In 1902 I accepted a permanent appointment on the United States Geological Survey, and from that time until the fall of 1906 was associated with that survey in various capacities.

Q. Tell us of those various capacities. What was your position at first, when you began regular work with the United States Geological Survey?

A. My first work for the Geological Survey was as assistant geologist and the bulk of my work was in connection with southern and eastern iron ore and other economic deposits.

Q. What do you mean by economic deposits?

A. In the Survey there is a distinction made between the areal mapping, the purely scientific work, and the mining geology or economic work. At that time there were two divisions on the Survey devoted to economic geology. One of them was in charge of Dr. Emmons, who handled the gold, silver, copper, lead and zinc ores. The other, at the time I joined the Survey was in immediate charge of Dr. Hayes, and had supervision over the iron and manganese and aluminum

ores and the non-metals. In 1905 I was placed in charge of this latter division, and remained in charge until my resignation, in the fall of 1906.

Q. That is, during the latter part of your service you were in charge of the division of the survey which had to do with economic iron ores?

A. Yes, sir.

Q. What important iron ore investigations did you have charge of during 1905 and 1906, if any?

A. My personal work during those years was really a continuation of work which had been started previous to that. From the beginning of my connection with that survey I had examined various iron ore districts for them, and I am not sure about the date of the different reports. But between the years 1902 and 1906 I prepared personally reports on iron ores in Virginia, northwestern Georgia, Texas, northern Alabama and New York State.

Q. Tell us some of the iron ore deposits which you have studied and examined in addition to those which you have just mentioned which you have made reports on for the Survey. I assume that you visited each of these districts on which you reported?

A. Yes, sir.

Q. Are there any other districts which you have studied with care?

A. At various times before, during and since my connection with the United States Geological Survey, I have examined in more or less detail iron ore deposits in practically all of the southern and eastern states, in British Columbia, in New Brunswick, in Nova Scotia and Newfoundland. In some cases these were reports for the state or the federal geological service, and in other cases they were reports for corporations or individuals.

Q. You have been the author of different reports for the state and federal service, have you?

A. I have been the author of a number of reports for the federal survey. I am not sure that during my connection with New York State any of the examinations which I made in

that State were published. At a somewhat later date they were, I know.

Q. Published as reports on investigations that continued over the period of your membership?

A. Yes, sir. During several years of my connection with the Geological Survey it was necessary for me to prepare, in addition to my other duties, the iron ore statistics covering the production of the various years. My memory is that the official reports for 1905, 1906 and 1907 were prepared by me.

Q. I believe at least one of them is in evidence in this case. What were the years you gave us—1905, 1906, 1907?

A. My memory is that the reports for those three years are the ones. I took up the work immediately after Mr. Birkinbine had given it up. My impression is that the last report he prepared was for 1904, though it is merely a matter of detail, which can be verified readily enough.

Q. In addition to your engineering and geological work, have you had any experience in metallurgy?

A. I have never practiced metallurgy as a direct or important part of my work. The only connection in which I have made a special study of it was in regard to the effects of the various metallurgic processes on the value of ores. In this, in a somewhat related connection, I made a very detailed investigation of the utilization of blast furnace and of iron and steel slags. This investigation was in part paid for by the federal survey, though made prior to my connection with that organization, and was later published by the institution. Since then I have made private reports upon the condition of the slag recovery processes for several corporations.

(Whereupon an adjournment was taken until to-morrow, Friday, October 10, 1913, at 10:30 o'clock A. M.)

NINETY-THIRD DAY.

EMPIRE BUILDING,
71 Broadway, New York City,

Friday, October 10, 1913.

Before Special Examiner JOHN ARTHUR BROWN.

Present on behalf of the United States, MR. DICKINSON and MR. COLTON.

Present on behalf of the defendants, MR. LINDABURY, MR. SEVERANCE, MR. BOLLING and MR. REED; also, on behalf of the Great Northern Iron Ore Interests, MR. CHESTER W. CUTHELL.

MR. REED: With the permission of counsel for the complainant, Mr. Eckel is withdrawn from the witness stand for the present.

CHARLES F. RAND

was called as a witness on behalf of the defendants, and being first duly sworn, testified as follows:

DIRECT EXAMINATION

By MR. REED:

Q. What is your occupation?

A. I am president of the Spanish-American Iron Company and president of the Buena Vista Iron Company, and I am interested in other mining enterprises in Cuba and in the United States.

Q. Where do you live?

A. At West Orange, New Jersey.

Q. Your offices are in New York?

A. My offices are in New York City.

Q. Is the Spanish-American Iron Company a subsidiary corporation of any steel company in the United States?

A. It is owned by the Pennsylvania Steel Company.

Q. How about the Buena Vista Iron Company?

A. That is owned by individuals and is not controlled by any steel company.

Q. It is not controlled by the Pennsylvania Steel Company?

A. They have no interest in it.

Q. Are you interested in other mining companies that are not controlled by steel companies?

A. I am interested in other mining companies, but in no other iron mining company.

Q. These two, the Spanish-American and the Buena Vista, are the two iron mining companies with which you are connected?

A. And I have an interest in the Ponupo Manganese Company. That is not connected with any steel company.

Q. How long have you been familiar with Cuban iron ore properties, in which the Pennsylvania Steel Company is interested?

A. I have been president of the Spanish-American Iron Company for twenty years.

Q. How long has the Spanish-American Iron Company been mining and shipping ore from Cuba?

A. For nearly twenty years.

Q. Do you remember in what year shipments commenced?

A. I think it was in 1895.

Q. Those shipments that were made in 1895 were from the south coast, were they not?

A. They were.

Q. When did shipments commence from the north coast?

A. In December, 1909.

Q. Was your company, the Spanish-American Iron Company, the first to ship the north coast ores to the United States?

A. Yes.

Q. How long have those north coast deposits been known? Are they recent discoveries?

A. We discovered them in 1903.

Q. When did your company, the Spanish-American Company, first acquire an interest in the north coast deposits?

A. In 1903.

Q. How long prior to 1903 had it been known that there were iron ore deposits on the north coast of Cuba?

A. We had reports of deposits in the eastern end of Cuba

some years before that time, but in 1903 we found what is called the Mayari deposit.

Q. How long have the deposits on the south shore been known?

A. I think since about 1885.

Q. How long have they been mined?

A. One of the companies began operating in about the year 1889.

Q. I see in Government Exhibit No. 365, Volume 12, page 2,642, which is a pamphlet published by the Geological Survey, that the Juragua Iron Company made shipments from Cuba in 1884 and in each of the years following that. From what part of Cuba were those shipments made?

A. Those shipments were made from the iron mines near Santiago de Cuba.

Q. These are on the south shore of Cuba, are they?

A. They are.

Q. With what steel company, if any, is the Juragua Iron Company connected?

A. I understand it is owned by the Bethlehem Steel Company.

Q. Have you made an estimate, Mr. Rand, of the quantity of iron ore in the Santiago district on the south shore of Cuba?

A. I have.

Q. How much merchantable iron ore in that district is controlled by your company, the Spanish-American Iron Company?

A. Our iron ore reserves amount, at the present time, to about three and a half million tons at that place.

MR. DICKINSON: Just what place is that?

MR. REED: Santiago.

THE WITNESS: Near Santiago.

By MR. REED:

Q. And have you estimated the reserves at that place of merchantable ore controlled by the Juragua Iron Company?

A. I believe their ore reserves amount to about two and one-half million tons.

Q. What kind of ore is that, Mr. Rand? Is it hard or soft in texture?

A. Hard hematite and magnetite.

Q. Of Bessemer quality?

A. Of Bessemer quality.

Q. It is from that deposit, I think you have said, that these shipments have been made since 1884?

A. Yes, sir. The Juragua Company's shipments began in 1884, and the shipments of the Spanish-American Iron Company began a few years later.

Q. Have you made a study of the iron ore deposits on the north shore of Cuba?

A. I have. I am very familiar with that district.

Q. Have you made visits to that district?

A. A great many visits.

Q. Have you measured the ore in places?

A. I have had the ore which is owned by the companies in which I am interested examined by engineers, under my direction.

Q. Have you had it drilled?

A. Yes, sir; it has been drilled.

Q. How does this north shore ore lie, Mr. Rand? Is it in lenses, or is it in sedimentary deposits?

A. It is a blanket deposit, covering a very large area. The deposit is about twenty-five feet in thickness; it is at the surface; there is no overburden; pine trees grow in it, ferns and small shrubs, but there is no waste or other covering.

Q. Stripping then is a very simple matter?

A. There is no stripping to be done whatever.

Q. In texture, what is this ore like, in these north shore deposits?

A. It is of the consistency of clay.

Q. How is it mined?

A. It is mined with steam shovels and other similar machines.

Q. No blasting is required?

A. No blasting.

Q. How far does the greater part of the ore lie from the

sea? Can you give us an approximate estimate of the average distance of the land transportation necessary?

A. At Mayari the ore is twenty miles from the sea. At Moa the waves of the ocean lap up on the iron ore.

MR. DICKINSON: What is that last place?

THE WITNESS: Moa. The iron ore is at the sea at Moa.

By MR. REED:

Q. You have made a study of the costs of mining there and in other districts, have you?

A. I am familiar with the costs of mining.

Q. How do the costs of mining this north shore Cuban ore contrast with the mining of ores in other parts of the world?

MR. DICKINSON: I object to that as being too general and indefinite.

MR. REED: Will you answer, please, Mr. Rand?

THE WITNESS: The cost of mining is very small.

By MR. REED:

Q. Well, how does it contrast with the cost of mining in open pits on the Mesabi?

MR. DICKINSON: I object to that. The witness has not shown yet that he is qualified to speak as to the cost of mining on the Mesabi.

THE WITNESS: It is not any more, and I believe it is less.

By MR. REED:

Q. Have you made an estimate of the quantities of iron ore of this character that lie in the north shore deposits of Cuba?

A. The soft ores of the north coast of Cuba cover about 270,000 acres of land, and amount, to the best of my information, to more than three thousand million tons.

MR. DICKINSON: That is three billion?

THE WITNESS: Three thousand million.

By MR. REED:

Q. Have you made an estimate of the reserves controlled by different interests on the north shore of Cuba? Take the

Mayari district first, if you please. How much iron ore in that district does your company own, and what is its acreage?

A. I have prepared carefully a memorandum showing the acreage owned by different interests, and the tonnages.

Q. Have you prepared this yourself, Mr. Rand?

A. I have prepared this myself, and I hand it to you.

(Here a table was marked Defendants' Exhibit No. 111.)

MR. DICKINSON: Is that all north shore?

THE WITNESS: I have at the bottom included the Santiago de Cuba district.

MR. DICKINSON: Then this table covers the whole of Cuba?

THE WITNESS: It covers the whole Island of Cuba so far as my information goes.

By MR. REED:

Q. I call your attention to Defendants' Exhibit No. 111, being the memorandum you have just produced, and I ask you to state on which coast, the north or south coast, the Mayari district lies?

A. It is on the north coast of Cuba.

MR. DICKINSON: Excuse me; you know that independently of the memorandum?

THE WITNESS: I have been there.

MR. REED: There is nothing on the memorandum to show that.

MR. DICKINSON: The reason I say that is because I am going to make some objections to the memorandum later.

By MR. REED:

Q. On which coast does the Levisa Bay district lie?

A. On the north coast of Cuba.

Q. The Moa-Taco district?

A. The north coast of Cuba.

Q. And the Camaguey district?

A. That is in the center of the island, about 40 miles from the north coast of Cuba.

Q. And the Santiago de Cuba district?

A. That is on the south coast of Cuba.

Q. Have you made any estimate of the iron ores, if there are any, in the province of Pinar del Rio?

A. I have made no estimate of the ores in that district.

Q. You have not the same familiarity with that district that you have with the eastern Cuba ores, I take it? Is that so?

A. I am not familiar with the Pinar del Rio district to the same extent.

Q. And this estimate contained in Defendants' Exhibit No. 111 is substantially only the eastern Cuba reserves?

A. It covers only the district to which the memorandum refers.

Q. It does not include any ore in the district in the western part of the Island?

A. It does not include any ore in the western part of the island, that there may be in the western part of the island.

Q. Have you visited these different deposits that are mentioned on Defendants' Exhibit No. 111?

A. I have visited them all except the Camaguey district. The information that I have given with respect to the holdings of the Bethlehem iron mines was furnished to me by the general manager of the company.

Q. Have you personal knowledge of the Mayari district?

A. I have. The explorations were conducted under my direction and I have visited the district repeatedly.

Q. How about the Levisa Bay district?

A. I have visited the Levisa Bay district repeatedly, and the information that I have given is based upon general observations and also upon information that has been furnished me by the owners of the property.

Q. How about the Moa-Taco district; have you knowledge of that district?

A. I am fairly familiar with the Moa-Taco district, and the figures I have given for the tonnage of the Spanish-American Iron Company and the Buena Vista Iron Company are based on reports made to me by engineers in my employ, and the information regarding the tonnage of the other companies is based upon my general knowledge of the district. I have visited every one of the properties, and I have con-

ferred with the owners and have obtained information from them as to their tonnages.

Q. You have a personal knowledge of every property in those three districts, have you; any property of any size?

A. Yes.

Q. And your information as to the Santiago de Cuba district is of what sort?

A. As to the property of the Spanish-American Iron Company, that is based on reports made to me by my own engineers and based on my own knowledge, from repeated visits to the property, and as to the tonnage given for the Juragua Iron Company, that is also given after a visit to the property and based on reports given to me by the general manager of that company.

MR. REED: We now offer in evidence Defendants' Exhibit No. 111.

MR. DICKINSON: That is objected to as incompetent, hearsay and secondary, the witness having shown that much of the result set forth in said memorandum is based upon hearsay, and not on matters within his own knowledge.

(The paper refered to was thereupon marked "Defendants' Exhibit (Rand) No. 111, October 10, 1913," and will be found in the volume of exhibits.)

By MR. REED:

Q. Will you describe the ores of those north coast deposits for us a little more fully? You have described the physical texture. Now tell us something, if you will, of their analyses; how do they run in iron?

A. The ore in the form in which it is delivered in this country contains 55.5 per cent. iron.

Q. In the form in which it is mined, what percentage does it contain?

A. It contains, when dried at 212 degrees Fahrenheit, 48 per cent. iron; in its natural condition, approximately 35 per cent.

Q. The ore in its natural condition, then, contains a very large quantity of moisture, hydroscopic and combined moisture?

A. Between 35 and 40 per cent. of water.

Q. Have you prepared any statement of the combined analyses of your shipments of this ore?

A. I have a memorandum containing analyses of the ore, which I hand you.

(The paper produced by the witness was marked "Defendants' Exhibit No. 112.")

By Mr. Reed:

Q. I call your attention to Defendants' Exhibit No. 112, being this memorandum of analyses which you have furnished, and I ask you what that represents. It is headed "Analyses of Mayari ore of the first four months of 1913." Is that an average analysis of the shipments during the first four months of 1913?

A. It is.

Mr. Dickinson: Does that 48.10 mean analysis in its dry state?

Mr. Reed: That is what I am going to ask him. Of course it is impossible to bring out all these things in one question.

Mr. Dickinson: I understand.

By Mr. Reed:

Q. The first analysis given on this memorandum, Mr. Rand, which commences with the figures 48.10, under the heading "Iron," represents an anlysis of the ore in what condition?

A. That represents the ore as it is mined when dried at 212 degrees Fahrenheit.

Q. What is the second analysis, which starts with the figures 55.57 iron?

A. That represents the iron ore in the condition in which it is after it is dried, and is the condition in which it is shipped to this country.

By Mr. Reed:

Q. Mr. Rand, what treatment is this ore subjected to in order to bring it to the condition shown in this last analysis?

A. The ore is dried in furnaces resembling cement kilns, and the water is driven off by heat from burning powdered coal.

Q. By that process do you succesfully expel the combined water in addition to the hydroscopic water?

A. We do.

Q. And the resultant product is that which is shown by your second analysis here?

A. It is.

Q. I infer from the phosphorus content that this product is of Bessemer quality. Is that correct?

A. It is of Bessemer quality.

Q. What is the texture of the product?

A. It is of a sandy character after it is dried, and contains pellets of various sizes.

Q. Are those pellets sufficiently large to be used to advantage in blast furnaces?

A. The drying of the ore in this manner prepares it so as to be suitable for blast furnace use.

Q. Do you happen to know the manner in which the powdery ores of the Mesabi range act in a blast furnace?

A. I am not a metallurgist.

Q. I wondered if you had ever observed them?

A. I am not familiar with the practice.

Q. Do you find that this nodulized Cuban ore is inclined to be blown out of the furnace at all?

A. I am not a metallurgist, Mr. Reed, and I do not feel qualified to testify as to blast furnace practice.

Q. I want to ask you as to the south Cuban ores. How do they run in iron content?

A. From 55 to 59 per cent. in iron.

Q. They are shipped in their natural state, are they?

A. They are.

Q. Without treatment of any kind?

A. Without treatment of any kind.

Q. Do they carry much moisture?

A. About one per cent. of moisture.

CROSS EXAMINATION

By Mr. Dickinson:

Q. Mr. Rand, looking at that paper, Defendants' Exhibit No. 112, and taking that line under the head of dried ore in the first column, 55.57, that means that a ton of ore as prepared for shipment would analyze showing that much iron content, does it?

A. Yes, sir.

Q. How much would a ton of ore so prepared and so analyzed represent in tonnage of the ore in its natural state? In other words, how much ore mined in its natural state would it require to reduce to that ton which shows this analysis?

A. It requires, roughly, one and a half tons of the natural ore to produce one ton of the dried ore.

Q. Are you familiar with the cost of mining the Mesabi ores?

A. In a general way. I am not connected with any of the Mesabi mining companies, and I only have general information regarding the Mesabi range.

Q. Derived from reading and hearsay?

A. Yes, sir.

Q. And you do not know, and would not undertake to state what that cost is—I mean of your own knowledge?

A. I have no reports of Mesabi mining companies before me. I have visited the Mesabi range.

Q. Referring to this Exhibit No. 112, the one just referred to, showing the percentages therein set out, on what mines is that based?

A. On the Mayari mines, which are now shipping.

Q. And not upon any other mines?

A. Not upon any other mines.

Q. Are there any other shipping mines there?

A. No other properties shipping the north coast ores at present.

Q. How much area is now being mined? That is to say, the operations in mining for development—how much of that Mayari territory which is represented by these shipments?

A. The Mayari territory, which covers nearly 40,000

acres, has all been carefully explored. The area on which mining operations are now being conducted probably does not exceed 200 acres.

Q. During the year 1912 did you run your mining operations there to their full capacity?

A. No, sir.

Q. How about 1913?

A. We are still operating at only a fraction of our capacity.

Q. How about your kilns? Would that apply also to your drying kilns? Are they run to their full capacity?

A. We have only one-half our drying kilns in operation.

Q. You mean at present?

A. At present.

Q. How would that apply for the year 1912?

A. We ran only about one-half our kilns in 1912.

Q. To what extent, if any, have you marketed in the United States this nodulized iron?

A. We have brought to this country about 1,300,000 tons.

Q. But a portion of that has been for your own use, has it not, or rather, the use of your company?

A. Almost all of it has been used by the Pennsylvania Steel Company and the Maryland Steel Company.

Q. And a very small percentage of it has been offered on the market or put on the market?

A. We have sold about 55,000 tons to other people.

Q. Within what period of time?

A. In the year 1911 we sold 8,790 tons.

In the year 1912 we sold 29,211 tons.

In the year 1913 we sold 16,667 tons.

Q. Do your holdings there and your capacity for production exceed the demands of your own companies for operation?

A. They do.

Q. Is there any demand, or has there been, for this nodulized iron, to any large extent, in this country?

A. We have not been willing to sell it to outside interests until recently.

Q. Why?

A. It was a new material, and the uses of it were not entirely understood. It was thought best not to offer it for sale until the metallurgy of it was better understood.

Q. And when were you first willing to offer it for sale on that basis?

A. It is only within about a year that we have felt willing to let other people try it.

Q. When did your company first begin to use the northern Cuban ores?

A. In 1910, I believe.

Q. These ores in Cuba, both in the north and in the south, have been known for a great many years, have they not?

A. The south coast ores have been known since about 1885. The north coast ores were not discovered by us until 1903.

Q. Were they discovered by your investigation?

A. They were discovered by engineers sent out by me.

Q. Do you know anything about Mr. W. J. Hayes having made any discoveries there in 1901 in northern Cuba?

A. You refer to Mr. C. Willard Hayes, perhaps, of the Geological Survey?

Q. Yes, that is the name.

A. I have seen his reports.

Q. And to what period does that refer?

A. I think that is about the period to which I refer.

Q. What is the cost of this nodulization per ton in its finished state?

A. I would rather not go into the details of the cost of our operations, except to say that if our holdings were operated to their capacity, we could deliver this material in the United States at less than five cents.

Q. How?

A. At less than five cents per ton per unit of iron.

Q. That does not answer the question that I put to you, Mr. Rand, at all, as I conceive it. Is it not a matter of general knowledge that this nodulization costs about a dollar a ton?

A. It costs about a dollar a ton.

Q. Were you counting that in the cost of mining?

A. No.

MR. REED: Counting what in the cost of mining?

MR. DICKINSON: The cost of nodulization.

That is all, Mr. Rand.

REDIRECT EXAMINATION

By MR. REED:

Q. Mr. Rand, how does the analysis of these other north coast ores compare with the analysis of the Mayari ores?

A. The deposits are substantially alike.

Q. There is no important difference, is there?

A. No important difference.

MR. REED: That is all, Mr. Rand. Thank you.

MR. DICKINSON: That is all, Mr. Rand.

MR. REED: The defense offers in evidence Defendants' Exhibit No. 112, being the memorandum of analyses presented by Mr. Rand.

(The paper referred to was thereupon marked "Defendants' Exhibit (Rand) No. 112, 1913," and will be found in the volume of exhibits.)

MR. REED: Mr. Eckel, will you take the stand again, please.

EDWIN C. ECKEL,

a witness previously sworn on behalf of the defendants, was recalled and testified further as follows:

DIRECT EXAMINATION (Continued)

By MR. REED:

Q. Mr. Eckel, what was your first acquaintance with the iron ore deposits of Alabama?

A. I visited the Birmingham district in 1901.

Q. Have you been there since?

A. Since that date I believe that I have spent more or less time each year in that district. The north Alabama districts I examined in 1904 or 1905 in considerable detail. I have also visited——

Q. (Interposing) By "north Alabama districts" do you mean the Birmingham district?

A. No. I am speaking now of the productive district which is based upon the iron and steel plants in the Chattanooga and Attalla and Gadsden districts.

Q. What was your first work at Birmingham, in the Birmingham district proper?

A. The first detailed work I took up in the Birmingham district was, I think, in 1905. At that time we were preparing to issue special reports on the various iron ore districts of the southern states, and were trying to get an idea of the areas which should be included in each report, so as to make them commercial as well as economic units, in a way, and keep them down to a reasonable size. I examined most of the Birmingham district in that year. In 1906 the detailed work, to which this was preliminary, was taken up, and during that year we had two distinct parties in the field, one, under Mr. Butts, was in charge of the areal mapping and the examination of the coal seams. The other was in charge of Mr. E. F. Burchard, and covered an examination of the iron ore resources of the district.

Q. Now, what connection did you have, if any, with Mr. Burchard's studies of the iron ore reserves?

A. I was in entire charge, of course, of the work in the south. I was in immediate charge at all times of the work in the Birmingham district, and until I left the Survey I had expected to prepare a very large portion of the Birmingham report. As a matter of fact, the work on the Birmingham report was concluded after I left the Survey, and the only sections which I contributed to it finally were several chapters on the origin of the ores.

Q. The estimates themselves were made by Mr. Burchard, were they?

A. The estimates were made by Mr. Burchard.

Q. Were you familiar with the report itself—I am speaking now of Bulletin 400—in the course of its preparation until you left the Survey, were you familiar with the work done on it up to that time?

A. Nothing had been done in the way of preparing the report when I left the Survey.

Q. Nothing had been done in the way of preparing it?

A. No, not at all. That report was not published until several years after that. As a matter of fact, I wrote my own chapters about 1908 or thereabouts.

Q. The Bulletin itself was published in 1910?

A. I believe it was. I might say that the Buehard estimates were published independently by Mr. Burchard at a date prior to the publicaton of the Bulletin, in a Survey publication.

Q. When was the field work which underlaid these estimates or furnished their foundation actually done in Birmingham?

A. Practically all of the field work was completed in 1906. The work after that date was clearing up a few odd points and bringing the material up to date.

Q. Then the actual field work was done under your direction?

A. I think so, entirely.

Q. I wish you would describe the nature of these deposits of red ore that occur in the Birmingham district, and the outcrops on Red Mountain.

A. The red ore deposits of the Birmingham district are merely a section of a very extensive deposit of ore of closely similar type which is mined in Wisconsin and at various points in eastern Canada and the United States, from Nova Scotia to Alabama. The ores are of sedimentary origin. They occur as regular beds interstratified with shales and sandstone which were deposited approximately at the same time that the ores themselves were. The ore beds extend for great distances along the strike or outcrop, as well as down the dip, and their tonnage can be estimated with a very great degree of accuracy.

Q. Have you studied this same deposit or class of ore in other states than Alabama, Mr. Eckel?

A. Yes, I have made very detailed studies of it in the states of New York, Virginia, and in small areas in Tennes-

see and West Virginia. I have also examined it in considerable detail in Georgia and in Nova Scotia.

Q. Does this ore occur in workable quantities in these other states that you have named?

A. It has been worked in every state which I have named, and at present it is being worked in every one of those states except West Virginia and Virginia. I might add that it has for many years furnished a large tonnage in Pennsylvania.

Q. Is it still being mined in Pennsylvania?

A. I believe that some of the mines are still in operation in eastern Pennsylvania, but of that I am not sure.

Q. You have some acquaintance with the manner in which ores are deposited in other ranges, have you not?

A. Other types of ore deposits?

Q. Other types of ore deposits.

A. Yes, I am fairly well acquainted with the brown ores and magnetites at least, and other forms of deposit.

Q. How is this ore that is found in Red Mountain, Birmingham, and the similar ore that you say is found in other states, how is its manner of deposit as compared with the brown ores of Alabama from the standpoint of regularity and reliability, if I may use that word?

A. The red or Clinton ore deposits were of sedimentary origin, and because of that fact their regularity is far greater than any other type of ore deposits. That is true not only of the red ores of the United States, but of the ores which form the basis of the French and German iron industries, and of the large deposits in Newfoundland.

Q. They are all sedimentary deposits?

A. They are all sedimentary deposits.

Q. I suppose all of these deposits were first attacked at the outcrop?

A. That was the obvious thing to do, of course.

Q. And have geologists always appreciated the continuity of those ores?

A. I think that most geologists have, though there was a period during which in our own country and to some extent abroad there was a tendency to regard the ores as having been derived in another manner, and a feeling that possibly

the ore deposits would terminate at relatively shallow depths. This has affected the progress of mining in many districts. The most important instance, perhaps, was in Lorraine. At the end of a very expensive war the German Government unfortunately accepted this theory tentatively, and placed the boundary line of the ceded provinces at the back of the outcrop. As a result France to-day has still considerably more ore than Germany, but this fact was not demonstrated until deep drilling was taken up ten years or so after the war. That deep drilling, I might say, was based purely on geological considerations which should have been understood in advance.

Q. When that deep drilling was undertaken in these sedimentary deposits of Lorraine, were these theories as to the continuity and regularity of the iron measures verified by the results?

A. The drills demonstrated the absolute continuity of the deposits, and in fact since the drill holes were put down in the deeper parts of a basin, they have shown a higher grade ore and to a large extent a thicker deposit on the French side of the border than on the German side.

Q. How can you explain geologically the fact that at the lower part of these deposits the ore is if anything thicker and better?

A. That is not an invariable rule. The actual fact is that the ores were orginally deposited in large marine basins, and that they thickened originally towards the centers of the basins; the richer ores, not only in thickness but in metallic content, were deposited in the deeper portions of the basin. Now, if it happens that the present outcrop is on the edge of an original basin it is absolutely certain that the deeper workings will run into thicker and richer ore. If it happens that the present outcrop should be along the central line of a basin, the reverse would take place, and in each case the change would be gradual, and the deposits and area which have been considered would be very large compared with ore deposits of any other type.

That is to say, the Clinton ore changes in thickness even along the outcrop in the Birmingham district, but the rate of

change, where it is most rapid, is probably not over from a few inches to six or eight inches per thousand feet.

Ore deposits which originated by replacement might change from 500 feet in thickness to zero inside of a thousand feet.

Q. So that the quantity can be measured with greater confidence and more exactness——

A. Oh, with far greater accuracy.

Q. (Continuing) In the case of these sedimentary ores than in the case of replacement ores like these brown ores?

A. The brown ores in most cases I should say, in every case in which they originated by replacement of a limestone bed, are very irregular so far as the single deposit is concerned. If you are dealing with a large group of deposits you can establish generally certain average thicknesses and depths which will apply over large areas. By increasing the number of instances with which you are dealing, your percentage of accuracy is highly increased of course.

Q. But with brown ores you can not undertake to say that you will find brown ore on one forty because you have found it on an adjacent forty, can you?

A. Not with the ordinary brown ore.

Q. I mean with the brown ores of Alabama.

A. No, not with the brown ores of Alabama. The Cuban and Texan brown ores are of a somewhat different type, and in those cases the regularity is considerably greater.

MR. DICKINSON: You are speaking of brown hematite, are you not?

THE WITNESS: We are using the term "brown ore" to cover all the hydrated hematites, in order to avoid specifying such words as limonite, goethite and similar minerals, because, as a matter of fact, the brown ore deposit contains always several different iron minerals, and the term brown hematite is somewhat misleading.

MR. DICKINSON: Is not that the term generally used?

THE WITNESS: I think the words "brown ore" are used in Germany and in the United States.

MR. DICKINSON: I mean in Alabama.

THE WITNESS: Brown hematite?

MR. DICKINSON: Yes.

THE WITNESS: It is entirely correct, Judge, to say brown hematite. Brown ore is a little more usual term; that is all.

By MR. REED:

Q. Mr. Eckel, I call your attention to Defendants' Exhibit No. 107. Have you seen that exhibit before?

A. I have.

Q. Have you assisted to any extent in the preparation of it, in an advisory way or otherwise?

A. So far as the smaller area shown on this map is concerned, that is to say, area No. 1, I have assisted in the preparation of the estimates which are indicated both in figures and diagramatically in the lower right hand corner of the map.

So far as Area No. 2 is concerned I have merely discussed with Mr. Ellis the basis for the boundaries which he has adopted and have satisfied myself that they are entirely reasonable. I had made at one time a calculation based upon a somewhat different boundary for area No. 2, and as this calculation gave substantially similar results, so far as my memory goes, I believe that the figures for this area can be accepted as being very close to the truth.

Q. How does this Area No. 1 compare with the area that was selected in this Burchard report, United States Geological Survey Bulletin 400?

A. Area No. 1 was based entirely upon the figures which Mr. Burchard stated in that report.

Q. Was the area based on the area selected by him in that report?

A. In answering this question I was not referring to Mr. Burchard's tonnage figures, but to the figures as to distance along the outcrop and width back from the outcrop which Mr. Burchard specified; so that there is no possibility, within the limit of drafting accuracy, that Area No. 1 can differ in any respect from the area selected by Mr. Burchard.

Q. I mean, you took the same part of the outcrop and adopted the same district?

A. Absolutely. We adopted not only the same length of outcrop, but the same depth.

Q. Have you checked up the ownerships of land in that Area No. 1?

A. I have not personally, Mr. Reed. My first estimate on Area No. 1——

Mr. Dickinson: I object to the witness giving an estimate. He was only asked whether he checked them up, and he said he did not.

The Witness: I beg your pardon, Judge. I have said nothing of the kind at the moment.

Mr. Reed: Go on and answer the question, Mr. Eckel.

Mr. Dickinson: You have said nothing of what kind?

Mr. Reed: Do not argue with either of us, Mr. Eckel. Just answer the question.

The Witness: My first calculation on an area substantially similar to Area No. 1 was based upon a map which had been presented, I believe, by Mr. Perin, in the course of a Congressional investigation several years ago. This map was the official map of the holdings of the Tennessee Coal & Iron Company and of other companies in the Birmingham district, and had been used as the basis of the appraisal report made in 1904 or 1905 by a committee of engineers acting for the various companies.

All that I am saying now relates to work which was done individually, before I had ever spoken to Mr. Ellis in connection with the subject.

Mr. Dickinson: Are you through with your answer?

The Witness: Not yet. On this map—I am still referring to the original or Perin map—I laid off the areas which corresponded to those described by Mr. Burchard, and using the ownerships designated on that map, made a calculation of the tonnages which would correspond to them. I may say that this first calculation gave results within one per cent. or so of the final results shown upon the exhibit now in court.

Mr. Dickinson: Are you through?

The Witness: I am.

Mr. Dickinson: The answer is objected to as not being responsive to the question and as being volunteered and stating facts not called for by the question.

By Mr. Reed:

Q. Mr. Eckel, using the ownerships as shown on the Perin committee's map, and adopting the district that was adopted by the United States Geological Survey in Bulletin 400, what percentage of the ores of that area was owned by the Tennessee Coal, Iron & Railroad Company?

Mr. Dickinson: This is objected to because the basis of the question is largely Perin's map, which has not been produced in evidence, and is not in the record, and also calls for Mr. Burchard's estimate and not the estimate made by the witness. Therefore the question is incompetent.

By Mr. Reed:

Q. You understand, Mr. Eckel, that I am not calling for any estimates of tonnage by Mr. Burchard, but I ask you to use Mr. Burchard's area and Mr. Burchard's units of division of the district, and his methods of measurement of ore tonnages.

A. May I answer the original question to which Judge Dickinson objected, as to my recognition of Area No. 1 on this map?

Mr. Reed: I did not ask you any question about recognition of Area No. 1.

Mr. Dickinson: He is proposing a question and proposing an answer.

Mr. Reed: He is mistaken as to the purport of my question. That is what you mean, of course?

Mr. Dickinson: No, I do not mean that. I mean to say he is stating an entirely different thing.

Mr. Reed: Will you read my question, Mr. Stenographer?

(The question was read by the stenographer as follows:)

"Q. Mr. Eckel, using the ownerships as shown on the Perin Committee's map and adopting the district that was adopted by the United States Geological Survey in Bulletin No. 400, what percentage of the ores of that area was owned by the Tennessee Coal, Iron & Railroad Company?"

Mr. Dickinson: I would like to enter the further objection that it is not shown what area was adopted by the Bulletin, and that the Bulletin is not in evidence.

THE WITNESS: The percentages were substantially similar to those shown upon the exhibit now in evidence.

By MR. REED:

Q. Have you finished?

A. Yes.

Q. You mean Exhibit No. 107?

A. Yes, 107.

MR. REED: Mark that as an exhibit, please, (handing pamphlet to stenographer).

(The pamphlet was marked "Defendants' Exhibit No. 113.")

MR. REED: Defendants produce a volume, which has been marked "Defendants' Exhibit No. 113," and which is entitled "Department of the Interior. United States Geological Survey. George Otis Smith, Director. Bulletin 400. Iron Ores, Fuels and Fluxes of the Birmingham District, Alabama, by Ernest F. Burchard and Charles Butts, with Chapters on the Origin of the Ores, by Edwin C. Eckel. Washington, Government Printing Office, 1910," and offer in evidence the title page thereof and the map appearing as Figure 15 on page 128 of said volume.

MR. DICKINSON: This is objected to on the ground that the entire publication is not offered in evidence.

(The pamphlet referred to was thereupon marked "Defendants' Exhibit (Eckel) No. 113, October 10, 1913," and will be found in the volume of exhibits.)

By MR. REED:

Q. Have you made any subsequent studies, Mr. Eckel, to determine the proportion of Area No. 1, as it appears on Exhibit No. 107, that is owned by the Tennessee Coal, Iron & Railroad Company? Just answer yes or no, please.

A. Yes.

Q. Will you state what investigations you have made and what studies you have made?

A. In order to secure a more accurate base map than that which had been used by Mr. Perin, a map was prepared in the office of the Tennessee Coal, Iron & Railroad Company.

The areas on this map which were indicated as belonging to different ownerships, were prepared by the drafting department of that company and their accuracy was guaranteed by Mr. Crawford, president of the company, Mr. Allen, manager of the land department, and Mr. Ellis, assistant manager of the land department. In my further work I assumed that these statements as to ownership were correct. Acting upon that assumption, I recalculated the tonnages throughout Area No. 1, using the distances, thicknesses, widths, and other factors stated by Mr. Burchard in Bulletin No. 400. The results of these calculations are shown both in figures and in diagram in the lower right hand corner of Exhibit No. 107.

MR. DICKINSON: I object to the foregoing question and answer, because it is based largely upon a map not made by the witness, not verified by the witness, and accepted by him upon the hearsay statements of others as to its accuracy, and, therefore, as incompetent and secondary.

By MR. REED:

Q. Assuming, Mr. Eckel, that the ownerships stated on Exhibit No. 107 are correct, and that the map correctly shows the extent of the ownership of the Tennessee Coal, Iron & Railroad Company—I say, assuming that, and using the methods of calculation used by Mr. Burchard in his geological survey work on those ores in calculating the tonnages, what percentage of Area No. 1 is owned and controlled by the Tennessee Coal, Iron & Railroad Company?

MR. DICKINSON: This is objected to because it is based on secondary evidence, and because it is based upon units of area claimed to have been used by Mr. Burchard, and which units have not been introduced in evidence and are not identified.

MR. REED: The defendants now offer in evidence the whole of Defendants' Exhibit No. 113, and ask to have printed, however, only the title page and Figure 15 on page 128, unless counsel for complainant desire other parts of the same book to be printed at the same time.

MR. DICKINSON: So much of the said book as does not

purport to be statistics based upon investigations made by the Bureau in the course of business, is objected to.

MR. COLTON: You offer in evidence the whole of that exhibit, and if you take it down that way, the whole of your exhibit will be the title page and the map.

MR. DICKINSON: He meant the volume.

MR. REED: Previously I offered only the title page of the exhibit and the map.

MR. DICKINSON: Now you offer the whole volume?

MR. REED: The whole volume.

MR. DICKINSON: I understand.

(The pending question was repeated by the stenographer.)

MR. REED: What is the answer?

MR. DICKINSON: He has not answered that question. That was objected to.

MR. REED: Will you answer?

THE WITNESS: 37½ per cent.

By MR. REED:

Q. From your knowledge of the ores in that district, from examinations which you have made of the ore as appearing in the outcrop and open mines, will you state whether or not you believe that percentage to be a substantially accurate statement of the proportion of the ore in Area No. 1 that is owned by the Tennessee Coal, Iron and Railroad Company?

MR. DICKINSON: That is objected to because it is not shown that the witness has had sufficient knowledge to justify any such estimate.

THE WITNESS: That answer referred to the question which was in regard to the percentage of the acreage owned by the Tennessee Coal, Iron & Railroad Company.

By MR. REED:

Q. I don't remember having asked anything about the acreage or the percentage of the acreage.

MR. DICKINSON: I think the question calls for that.

MR. REED: Well, we will not quarrel about what I have asked.

By Mr. Reed:

Q. I ask you now what percentage of the tonnage in Area No. 1 is owned by the Tennessee Coal, Iron & Railroad Company, assuming that Mr. Ellis has correctly stated the ownerships on his exhibit 107.

Mr. Dickinson: That is objected to because based on hearsay and secondary evidence, and because the witness has not qualified himself to speak as of his own knowledge.

The Witness: 36.8 per cent.

By Mr. Reed:

Q. Mr. Eckel, have you been in the mines along this part of the outcrop in the Birmingham district?

A. I have been in a number of those mines; I have been along the entire outcrop from one end to the other, Mr. Reed, and I have measured it at a number of points. I have done that at various times from 1905 up to 1912.

Q. Have you been in the mines of the Tennessee Company, any of them?

A. Not all of them. In some of them, I have.

Q. Have you any knowledge of the results of the drill work that has been done back of the outcrop?

A. Yes.

Q. How far does your knowledge of that extend?

A. I went over these records in 1911.

Q. Of how many drill holes?

A. I believe at that time there were thirty or thirty-five drill holes.

Q. That is, including the Tennessee Company's drill holes?

A. Those were mostly T. C. I. drill holes; in fact, I believe there were that number of T. C. I. holes alone. In addition to that I have seen records of other drill holes published and unpublished.

Q. Now, at the risk of repetition I want you to confine your attention for a little while exclusively to area No. 1, and to the matter of tonnage of iron ore, and I ask you to assume that Mr. Ellis' testimony as to ownerships of that land in that area, as they appear on Exhibit No. 107, is correct,

and I ask you to use the methods of calculation of tonnage of iron ore as stated in Bulletin No. 400, and which is in evidence as Defendants' Exhibit No. 113; and on that assumption, and using those methods of calculation, what percentage of the tonnage of iron ore in Area No. 1 is owned or controlled by the Tennessee Coal, Iron & Railroad Company?

A. 36.8 per cent.

Mr. Dickinson: The question and answer are objected to as incompetent, because based on testimony given by others, and not within the knowledge of the witness.

By Mr. Reed:

Q. Again, Mr. Eckel, I ask you to assume the correctness of Mr. Ellis' testimony as to ownerships as they appear on Exhibit No. 107 and to use those methods of calculation which to you appear most accurate, sound and proper, and to state what percentage of the ore in Area No. 1—I am speaking of the tonnage—is owned or controlled by the Tennessee Coal, Iron and Railroad Company.

Mr. Dickinson: That is objected to because it calls for the witness assuming in his own mind a basis for the answer which is not disclosed and not subject to cross examination, and not given so that anyone could judge of the value of the answer.

Mr. Reed: Will you answer, please?

The Witness: Under those assumptions the ownership of the Tennessee Coal, Iron & Railroad Company would not differ very largely from the 36.8, which was the result of applying the Burchard method of calculation. The only difference would be that in place of decreasing the thickness slightly toward the southeast, and in place of making a heavy allowance for loss of ore during working, both of which corrections I would make for this area, but neither of which would make any serious comparative difference at that distance from the outcrop, I would carry the full outcrop thickness to the rear line of area No. 1, and would increase somewhat the percentages of workability assumed by Mr. Burchard. As those corrections would be applied throughout the entire area they would make practically no change in the relative percentages.

Q. What warrant have you for making those changes in Mr. Burchard's methods? Why do you believe it is proper to do that?

A. I believe that the red ores are continuous underground for a number of miles at least southeast from the outcrop, and I believe that to allow for a thinning within approximately one mile of the outcrop was an error in the calculation.

Q. Is your belief in this matter affected to any extent by the results of these drillings back of Red Mountain?

A. My belief in that matter is being confirmed by the results of the drillings that are put in at various points through the district.

Q. What would be the result so far as the Tennessee Coal, Iron & Railroad Company is concerned, if this district that has been selected for Area No. 1 were increased along the outcrop?

A. As you can see by looking at the map, if it were carried to the entire edge of the map it would decrease the percentage of the T. C. I. Company's holdings.

Q. Have you sufficient knowledge of the ownership of ore beyond Trussville to say what the effect would be of a still further extension?

A. I should say that the effect of any extension would be to decrease tonnage.

Q. To decrease tonnage?

A. To decrease the percentage of acreage and necessarily the percentage of tonnage owned, because, within relatively few miles, the map if continued in that direction would enter the sphere of the Attalla & Gadsden district, where the Tennessee Coal Company has no holdings whatever and where the Southern Steel and Alabama Consolidated Companies control large acreages.

Q. Suppose that Area No. 1 were extended further to the southward along the outcrop to any appreciable distance, what would be the effect upon the Tennessee Company's percentage, if you know?

A. I am not familiar with the ownership. I am not even approximately familiar with the ownership far to the southward of the southern boundary of this map. The reason for

stopping the boundary at that point was entirely different. The ore records in that area seem to be few, and the results are not entirely promising; so that, both in the original survey map and in these later maps, the boundary has been drawn in the vicinity of Sparks Gap.

Q. You know of nothing to the contrary of Mr. Ellis's testimony that an extension to the southward of Area No. 1 would diminish the Tennessee Company's percentage?

A. I do not.

Q. I call your attention to Area No. 2 as it appears on Defendants' Exhibit No. 107, and ask you how that compares with the other area considered by Mr. Burchard in his Figure 15 on page 128 of Bulletin 400, which is in evidence as Defendants' Exhibit No. 113. What change, if any, has been made in the larger area of Mr. Buchard?

A. Of the boundaries given in Exhibit 107 for Area No. 2, the northern, southern and northwestern boundaries are, of course, identical with those assumed by Mr. Burchard. The eastern or southeastern boundary is practically identical throughout probably half of its extent, but, beginning in section 17, township 18 south, range 2 west, the boundary given on Exhibit 107 diverges from the Burchard boundary. I should say that, in general from this point south as far as the vicinity of Parkwood in section 29, township 19 south, range 3 west, the boundary shown on Exhibit 107 is carried considerably to the east or southeast of the boundary shown on the Burchard map.

Q. What justification, if any, is there for that change in the boundaries adopted by Mr. Burchard?

A. It is purely a question of convenience. At the time that Mr. Burchard prepared that estimate there seemed to be no immediate possibility that mining would be carried on in the Shade's Mountain country, but now a shaft is being sunk in the vicinity of Oxmoor and it is entirely possible that some independents will be mining under Shade's Mountain in the next few years.

Q. Is Oxmoor in Shade's Valley?

A. Oxmoor is at the foot of Shade's Mountain, practically.

Q. Suppose the Burchard boundaries had been taken along the southeastern side of this tract, and that Area No. 2 had been cut off at Shade's Mountain, as Mr. Burchard seems to have done it, what material change, if any, would be made in the Tennessee Company's percentage in Area No. 2?

A. I prepared a calculation on that basis at one time. My memory of it is that the tonnage percentage was in the neighborhood of 35 or 36 per cent. I should say that no change in boundary within reasonable limits in that district would essentially change the relative results.

Q. Do you believe there is available or merchantable ore underlying this additional district that has been added to Mr. Burchard's district?

A. I do. Without any question, Mr. Reed. It is merely a question of whether it will be necessary at any time in the near future to take in that area, and that is a question for each company to settle for itself.

Q. It is in that district that the Seminole Land Company's purchases have been made, is it not? If you know.

A. I do not know, from my own knowledge, Mr. Reed.

Q. Are you familiar with the brown ores of Alabama?

A. I have visited most of the working deposits, and a number of the undeveloped deposits at various times.

Q. In what capacity did you study such deposits?

A. During 1905, in connection with my work on the red ores of northern Alabama, I visited most of the brown ore deposits in that field.

Q. In behalf of the Survey?

A. In behalf of the United States Geological Survey. In 1906, on behalf of the same Survey, I examined most of the deposits in eastern Alabama, and also visited the Russellville, Woodstock and Champion deposits which are directly contributory to the iron furnaces at Birmingham.

Q. What tonnage of brown ore do you estimate that there is contained in these districts that you have mentioned?

A. It is very difficult to give even an approximate estimate for brown ores of three entirely different districts. The only developed district which gives promise of showing very large

future reserves is the Russellville district. The other regions which I have mentioned appear to be advancing rapidly towards exhaustion. I should say that the deposits in eastern Alabama and in the rest of the state, exclusive of the Russellville district, would probably not exceed twenty-five or thirty million tons.

Q. What estimate do you make of the Russellville area?

A. The Russellville area will very easily yield 100,000,000 tons, and with its contiguous continuation, that might readily be tripled.

Q. Does the Tennessee Coal & Iron Company own anything in the Russellville district?

A. No, sir; Sloss-Sheffield is the largest of the iron-making companies to be interested in that district.

Q. Are you able to give us an estimate of the tonnage of brown ore controlled by the Tennessee Company in Alabama or any other state?

A. I cannot do that very well, Mr. Reed. I believe, however, I have testified that the ore districts of northern and eastern Alabama could not possibly contain over 25,000,000 tons. Of that there is no question in my mind but that the Tennessee Company has less than twenty per cent.

Q. That is, the exact tonnage you are not in a position to state, I assume?

MR. DICKINSON: This answer is objected to on the ground that it is not shown upon what basis the estimate is made, and that it is a mere vague, general, indefinite estimate made by the witness.

MR. REED: You mean the statement that the Tennessee Company has only 20 per cent. of the total?

MR. DICKINSON: Yes.

(Whereupon a recess was taken until 2 o'clock P. M.)

AFTER RECESS.

CHARLES F. RAND,

a witness previously sworn, was recalled and testified further as follows:

RE-DIRECT EXAMINATION

By Mr. Reed:

Q. There appears to have been some doubt as to whether, in your statement of the expected cost of this ore from the north shore of Cuba, when delivered at Baltimore, you included all elements of cost up to the time of delivery at Baltimore, and I wanted to ask you whether the statement of cost of five cents per unit was intended by you to cover the cost of mining, the cost of nodulizing, and the cost of transportation to Baltimore?

A. Yes, sir.

RE-CROSS EXAMINATION

By Mr. Dickinson:

Q. That question speaks of an expectation. Are you giving the cost that has been up to this time, or what you hope it will be?

A. I stated that the cost when the plant was in full operation would not exceed five cents per unit per ton of ore delivered at Baltimore.

Q. You mean with your present plant in full operation or with the developments there as you expect to make them?

A. With the present plant in full operation.

Mr. Dickinson: That is all.

Mr. Reed: That is all. Mr. Wood, will you take the stand, please? With your permission, Judge, we will let Mr. Eckel stand aside, as Mr. Wood is anxious to get back home.

Mr. Dickinson: Very well.

FREDERICK W. WOOD

was called as a witness on behalf of the Defendants, and being first duly sworn, testified as follows:

DIRECT EXAMINATION

By Mr. Reed:

Q. Mr. Wood, where do you live?

A. Baltimore.

Q. How long have you lived there?

A. Twenty-one years.

Q. What is your occupation, Mr. Wood?

A. I am president of the Maryland Steel Company.

Q. How long have you been president of the Maryland Steel Company?

A. Since its organization, in 1891.

Q. The Maryland Steel Company was incorporated in 1891, was it not?

A. Yes.

Q. Did it then start to build a plant, or did it take over a plant that had already been built?

A. It took over a plant, the construction of which was begun in 1887.

Q. Who began the construction of that plant? What company?

A. The Pennsylvania Steel Company.

Q. The Pennsylvania Steel Company in 1887 was operating works at Steelton, was it not?

A. At Steelton, Pennsylvania.

Q. Yes. And it had started to build an additional plant near Baltimore?

A. That is correct.

Q. What is the town or location of this Baltimore plant?

A. Sparrows Point.

Q. Did the Pennsylvania Steel Company operate that plant before the incorporation of the Maryland Steel Company?

A. Yes; for a short time after the completion, before the organization of the Maryland Steel Company.

Q. Since the Maryland Steel Company was incorporated, what interest has controlled its stock?

A. The Pennsylvania Steel Company.

Q. It has at all times controlled the Maryland, has it?

A. Yes.

Q. Were you familiar with the Sparrows Point works prior to the time when you took the presidency of the Maryland Steel Company?

A. Yes; the construction of the plant was under my direction.

Q. What products are made there at the present time?

A. Pig iron, steel rails, and ships.

Q. You have a ship yard, have you?

A. Ships and floating docks.

Q. How long have you been making steel at that plant?

A. Since about 1891.

Q. Was it the original intention to make steel, or was the plant as first constructed intended only to produce iron?

A. It was intended to produce pig iron, to be consumed at the works of the Pennsylvania Steel Company at Steelton.

Q. And that intention was modified as the construction of the works progressed?

A. That is correct.

Q. At the present time, Mr. Wood, what is the source of your ore supply at the Sparrows Point plant?

A. The mines of the Spanish-American Iron Company in Cuba.

Q. Partly on the south shore and partly on the north shore?

A. Yes.

Q. How long have you been using the north shore ores?

A. Since the first shipments were made from there, in the latter part of 1909 or early in 1910.

Q. Prior to that you used the south shore ores exclusively, did you?

A. No, not exclusively; south shore ores, in conjunction with other imported ores, and some ores from the Lake regions at times.

Q. Did you use a large quantity of Lake ores?

A. No, not at any time.

Q. From what other foreign country did you import ores?

A. Chiefly from the countries bordering on the Mediterranean—Spain, Algeria, and the islands of the Aegean Sea—the Grecian islands.

Q. When the Sparrows Point plant was built, was it designed or intended that it should be operated on foreign or domestic ores principally?

A. The reason for its location at tidewater was the intention to operate practically exclusively on foreign ores.

Q. Now, Mr. Wood, what are your present plans for ore supply at the Sparrows Point works? Will you run on the ores of any one district exclusively, according to your present plans?

MR. DICKINSON: I object to that as incompetent and irrelevant.

By MR. REED:

Q. Will you answer, please?

A. We expect to continue using ores from the north and south coasts of Cuba, as long as the south coast ores continue, and eventually to run exclusively on the ores from the north coast.

Q. You are familiar with the metallurgy of these Cuban ores, are you?

A. I am.

Q. You have studied their use in blast furnaces?

A. I have.

Q. What can you say as to the quality of the nodulized product from these north shore mines in Cuba; is it a good furnace ore?

A. Yes; it presents no special difficulties and has no marked peculiarities for furnace work.

Q. What process of making steel do you use at Sparrows Point, Bessemer or non-Bessemer?

A. Both.

Q. Is this nodulized product of Bessemer quality?

A. It is.

Q. Are the south shore Cuban ores Bessemer ores, too?

A. They are.

Q. What can you tell us of the quality of the steel that is made from the iron that is made from these Cuban ores, particularly the north shore ores? Is it of good quality?

A. It is of very superior quality. The presence of the nickel and chromium adapts it to possibilities which metal smelted from the ordinary ores is not suited to without the use of expensive alloys, and in the case of rails it is our belief that it produces the best rails in the world, and by the Bessemer process.

Q. By the Bessemer process?

A. By the Bessemer process. The records show that the proportion of failures in Bessemer rails made from that ore is smaller than in open hearth rails made from the ordinary ore.

MR. DICKINSON: I object to so much of that answer as is based on records as secondary evidence and hearsay.

By MR. REED:

Q. Do you keep in touch with the performance of your rails when laid in track?

A. We do.

Q. Have you opportunities to contrast the performance of your rails with those produced by other processes and other companies?

A. We have, and my answer is based on the results of observation of our inspectors.

Q. Mr. Wood, in the analyses that Mr. Rand produced this morning I notice that these north shore Cuban ores contain a quantity of chromium and a quantity of nickel. How does the steel that is made from those ores compare with the steel that is made from other ores in which chromium and nickel are added artificially for the purpose of alloy?

A. We consider that the presence of the several metals side by side through all steps of the smelting and conversion processes results in a more complete alloying and union of

those metals, which gives a great uniformity to the steel and superior results in several ways.

Q. It makes a more intimate alloy, so to speak?

A. Yes.

Q. Have you considered the question of the cost of these nodulized north Cuban ores delivered at Baltimore, and if so, please state what costs you expect when the whole plant at Cuba is in operation.

A. We expect the ores will cost not to exceed five cents a unit.

Q. By Baltimore I mean, of course, your works at Sparrows Point.

A. That is at the port of Baltimore.

Q. Within the port limits?

A. Yes.

Q. In your shipbuilding work at your plant do you require materials that you yourself do not produce?

A. Yes; we purchase the structural material and plates for the frames and plating of the ships.

Q. From what sources do you purchase plates?

Mr. Dickinson: Objected to as immaterial and irrelevant.

The Witness: From various manufacturers, the shapes mainly from the Pennsylvania Steel Company.

By Mr. Reed:

Q. Do you purchase some plates from the Pennsylvania Steel Company?

A. They do not manufacture plates, but furnish steel to an adjoining works, from which a portion of the plates are made.

Q. About what percentage of the plates, the plates that you buy for your shipbuilding works, comes from this steel of the Pennsylvania Steel Company?

A. I can only estimate roughly, from a half to two-thirds.

Q. The Pennsylvania Steel Company puts this steel in the form of slabs, I assume?

A. That is correct.

Q. And delivers them to a plate mill for conversion, is that correct?

A. Yes.

Q. Now, do you buy all of the remainder of your plates from one concern?

A. No.

Q. Are your purchases divided among different plate manufacturers?

A. Wherever they can be bought to the best advantage.

MR. DICKINSON: That is excepted to as irrelevant.

By MR. REED:

Q. Do you find that there is constant competition among other plate makers for your business?

A. There is constant competition.

MR. DICKINSON: The same exception.

By MR. REED:

Q. Do you find that the prices quoted to you by other plate makers are uniform or varying?

A. Varying.

MR. DICKINSON: The same exception as to that.

By MR. REED:

Q. Do you find that the prices at which you buy from these other manufacturers are uniform or varying?

A. Varying.

MR. DICKINSON: The same exception.

By MR. REED:

Q. Is this competition for your business an aggressive competition, Mr. Wood?

MR. DICKINSON: That is excepted to as too vague and indefinite, and also as irrelevant.

THE WITNESS: Yes.

By MR. REED:

Q. You buy other steel or iron products for use in your shipbuilding works?

A. We do.

Q. And do you find similar competition for your business there?

A. We do.

Q. Has that been the case in the past, Mr. Wood?

A. Ever since we have been engaged in shipbuilding, which began in 1892.

Q. And in the past there has been competition for your business?

A. Always has been.

Q. Of the character of which you have spoken?

A. Yes.

Mr. Dickinson: That is excepted to as too general.

Mr. Reed: You may cross examine.

CROSS EXAMINATION

By Mr. Dickinson:

Q. How many tons of ore do you get annually now from Cuba?

A. About 600,000 tons I think for the Maryland Steel Company.

Q. I am speaking of the Maryland Steel Company.

A. Yes; I haven't the exact figures before me, but I think it is about that.

Q. What proportion is that of your entire use of ore?

A. Practically all.

Q. How long have you been getting ore from Cuba?

A. Ever since the works were built.

Q. And that date is?

A. The furnaces were completed in 1889.

Q. All that time you have been getting ore from Cuba?

A. Yes; with the exception of brief interruptions due to epidemic, the Spanish War and causes of that kind.

Q. You have been supplying all your needs from that source during that time?

A. No, sir.

Q. You have been increasing your proportion of the use of Cuban ore, however?

A. Yes, sir.

Q. You have been using your own ore from there, have you?

A. Yes.

Q. And the other ores you bought from other people, or did you have other reserves?

A. We bought from foreign sources and from the Lakes.

Q. But you bought it all?

A. Yes.

Q. The Cuban ore is the only ore which your company owns?

A. The Maryland Steel Company does not own any ore deposits.

Q. I understand. It is an allied company that owns them, is it not?

A. That is correct.

Q. In speaking of the quality of that ore you use the term that it has presented no special difficulties. Will you define that a little more plainly?

A. All ores have their peculiarities and require slightly different treatment in smelting operations. This ore has no characteristics which require us to change our fuel, our periods, or anything more than details of manipulation.

Q. You say that you consider that steel made from that ore is better than steel made from other ores in this country where the nickel and the chromium are not component parts in the natural state and where they have to be combined?

A. I do.

Q. And that, no matter how this combination may be made, the result from the ore in its natural state with these qualities produces a superior steel?

A. We so consider.

Q. You are in competition with other people, are you not, in the sale of steel?

A. We are.

Q. And that is your contention?

A. Yes.

Q. Do your competitors concede that your steel is better than their steel always, all of them?

A. I doubt it.

Q. So they have an opposite contention—that their steel is as good as yours?

A. I presume so.

MR. REED: Only partly opposite, Judge.

By MR. DICKINSON:

Q. It is not generally conceded by all of your competitors that your steel is better than their steel, is it, in the trade?

A. I presume not.

Q. You make steel rails. What tonnage are you making now?

A. Our tonnage has varied for the past five or six years from 250,000 to 350,000 tons a year.

Q. Are you running to your full capacity now?

A. No.

Q. Did you run to your full capacity last year?

A. No.

Q. Did you the year before?

A. No.

Q. Did you the year before that?

A. I do not recall.

Q. At the present time to what percentage of your capacity are you running?

A. About 60 per cent.

Q. And last year?

A. Between 50 and 60.

Q. And the year before?

A. I should say about 60 to 75.

Q. And you think you make a better rail on account of the qualities you have spoken of than anybody else?

A. Yes, sir.

Q. What kind of rails do you make? Do you make what is called the standard rail?

A. Yes, sir.

Q. What prices have you been getting in the last four or five years for standard rails?

A. The prevailing prices.

Q. And that is $28 a ton?

A. For Bessemer rails.

Q. Notwithstanding your rails are better, you think, than the rails of other people, you are accepting the prevailing price?

A. Yes, sir. We are obliged to do that, in order to secure the business.

Q. What plates has your company purchased during the year 1912, from companies other than the allied properties?

A. I cannot give you the tonnage. I can say, however, that we have purchased from the Lukens Iron & Steel Company; from Worth Brothers; and, I think, also from the Steel Corporation. If not, we have deliveries in 1912, that were made on account of purchases in 1911.

Q. And in 1911 did you buy from all these companies you have named?

A. I cannot recall, but it is quite probable.

Q. Do you know the prices in 1911?

A. I do not recall them.

Q. Was there what was known as a base price in 1911?

A. I think so.

Q. Explain what your understanding of base price was in the sense you have answered that?

A. It is an advertised price, which appears in the trade papers, at which plates of a thickness within a certain range and of a certain range of quality, are sold; and if there are special requirements of shape, size, thickness or quality additions are generally made to that price.

Q. But the base price was first taken as a fundamental standard, and then all the additions were made according to the variations in the special demand, were they?

A. The same as practically all other lines of manufactured goods.

Q. Were the base prices generally advertised and were they uniform for all dealers?

MR. LINDABURY: You mean for all manufacturers, do you not, Judge?

By MR. DICKINSON:

Q. That is what I mean; for all manufacturers.

A. I cannot answer that.

Q. What is your observation on that subject for the year 1911?

A. My recollection is that, although there is an advertised base price, there is no absolute adherence to it.

Q. What do you mean by absolute adherence?

A. That it is possible to purchase at a somewhat lower price.

Q. How about the general adherence to it?

A. I cannot speak beyond our own experience.

Q. Did you do the buying in 1911?

A. No, sir; we had a purchasing agent.

Q. And you did not purchase in 1912?

A. No; not personally.

Q. What were your duties in 1911, especially? That is to say, what were the main duties that fell to your office?

A. General administrative duties.

Q. What did they have to do with the question of purchasing?

A. Occasionally the purchasing agent would refer a list of prices he had received on inquiry, with a request for advice as to the award of the contract.

Q. That was done occasionally?

A. Occasionally.

Q. It was not done uniformly?

A. No.

Q. Then your knowledge of that is based upon such occasional instances?

A. Yes.

Q. And your general duties were larger matters of administration, were they not?

A. Yes.

Q. And that would apply to previous years, would it not?

A. Yes.

Q. And to all kinds of purchases, would it not?

A. Yes.

MR. DICKINSON: That is all.

RE-DIRECT EXAMINATION

By Mr. Reed:

Q. On the larger purchases, was it or was it not the custom of your purchasing agent to consult you in the manner in which you have just described?

A. I can hardly say it was customary. It was occasional. He had discretion to the extent that a purchasing agent in a large corporation usually has, and unless some special question arose, he would generally decide the matter himself.

Q. On those occasions where you had familiarity with the prices that had been quoted to you, and where you did take up the matter with your purchasing agent, were the quotations all uniform or were they varying?

A. They were varying.

Mr. Reed: That is all.

RE-CROSS EXAMINATION

By Mr. Dickinson:

Q. Where they were uniform, there would be no reason for his consulting you, would there? There would be nothing to decide?

A. No.

Mr. Dickinson: That will do.

By Mr. Reed:

Q. Mr. Wood, in these cases in which the purchasing agent acted on his own judgment, did you understand that was because the prices were uniform?

A. Oh, not at all, necessarily.

Q. Did you understand that he would only consult you where the prices were varying?

A. Not at all.

Mr. Reed: That is all.

By Mr. Dickinson:

Q. Have you in mind any particular instances where he consulted you, and the prices, during the year 1911?

A. No; I cannot recall any at the moment. I may be able to locate some, if it is desired.

Mr. Dickinson: No; I just wanted to know in a general way.

The Witness: No, they are matters of routine.

Mr. Dickinson: That is all.

Mr. Reed: That is all, Mr. Wood. We are very much obliged to you. Mr. Eckel.

EDWIN C. ECKEL,

a witness previously sworn on behalf of the Defendants, resumed the stand and testified further as follows:

DIRECT EXAMINATION (Continued)

By Mr. Reed:

Q. Mr. Eckel, when we adjourned at the lunch hour I had just started to ask you about the brown ores of the Alabama and Tennessee districts. Are those brown ores in the Russellville district being used by furnace companies?

A. They are being used by one furnace company, whose furnaces are located in the Birmingham district, and at times by a company whose furnaces are located in northwest Alabama. The company located in the Birmingham district is the Sloss-Sheffield Steel & Iron Company; the company in northwest Alabama is, I believe, the Sheffield Coal & Iron Company.

Q. There has been some mention of the gray ores of Alabama or Georgia. Have you any acquaintance with those ores?

A. I examined those properties for the owners after leaving the Survey; prepared several reports on them. The tonnage there is rather large, as compared—that is, with a brown ore deposit—but because of the location of those deposits I hardly think that you can consider them immediate competitors of the red ores or of the better placed brown ores.

Q. How do those gray ores run in iron?

A. They range from 40 to 55 or 56 per cent. in metallic

iron. They are hard hematites, which are more like the Lake range ores than anything else we have in the South.

Q. Are there points in the Southern States east of the Mississippi River at which pig iron is now being made and sold in competition with iron from the Birmingham district?

A. There are very many furnaces located from Virginia southwestward through Kentucky, Tennessee, Georgia and Alabama, which produce pig iron, and in a general way, practically all of these furnaces compete up to their productive capacity with Birmingham pig iron in many markets. That is purely a question of freight rates and costs in the various districts.

Q. Do many of those ship their ore to Cincinnati?

A. The furnaces along the Chesapeake and Ohio Railway in Virginia ship, I should say, probably half their output to the Cincinnati district, and the furnaces in eastern Tennessee, I believe, meet the Birmingham pig iron in Ohio and at other northern points. All of these southern irons are essentially of the same class. With the exception of a few points at which they have been converted into steel, the bulk of it is foundry iron, and they meet wherever there is sufficient foundry demand at the prices.

Q. Now, there are large tonnages of brown ore in Virginia, are there not?

A. There are fairly large tonnages of brown ore still in Virginia, available under present conditions, but the very large tonnages which we know to exist are of ores which cannot be concentrated with an ordinary washer profitably to-day. The entire hope there lies in the development of new concentrating processes, or, I might say, processes which are now being tried out.

Q. Are steps now being taken to develop a method of cheap and effective concentration of large tonnages of these Virginian ores?

A. For the last three years a concentrating process of an entirely novel design has been under experiment and development at a Wilmington laboratory. It will be placed in operation next year in Virginia. This process was worked out originally with the special idea of treating some of the low

grade Virginian ores which we know exist in very large tonnage.

Q. Have you yourself done work in connection with that project, been consulted, I mean?

A. Yes. I have been in charge of all the prospecting and development work in connection with the selection of ore lands which were to be used with this process. I have seen the process in action at the laboratory and have gone over a large number of the records of practice. So far as we can see now it is entirely practicable to carry up the Oriskany brown ores of Virginia to the grade of the Lake Superior district at a price well under the Lake ores delivered in the same district.

Q. The cost of Lake ores where?

A. In the same district.

Q. That is in Virginia?

A. Yes.

Q. Can you give us any estimate of the tonnage of brown ore which will be rendered useful by the development of this new process?

A. I should hesitate to give you a detailed estimate Mr. Reed. On one property which has been examined with considerable care, and which we worked for a number of years, there are approximately 20,000,000 tons now not workable which will be placed on the market under such a process.

Q. And there are other properties of large size, are there?

A. Yes. That is one of the moderate sized properties of the district. I should say that the total tonnages rendered available might reach up to 100,000,000 tons of concentrates.

Q. 100,000,000 tons of concentrates?

A. Yes.

Q. Have you ever made any study of the iron ores in the State of Texas?

A. Yes, to some extent. In 1903 or 1904 I examined a portion of the Texas brown ore district. This discovery covers portions of twenty or more counties in northeast Texas, and the entire area which it includes is probably some ten or fifteen thousand square miles. At that time the question of preparing special reports of the various southern iron ore districts

was under consideration by the United States Geological Survey, and I visited the Texas district, among other reasons, for the purpose of determining whether the reports issued by the Texas Geological Survey, which had described it as being a large and promising district, had any serious foundation in fact. The tonnages which they reported and the areas which they described as being iron bearing were so large that it seemed best to check up the matter before we went further. The result of this examination, which covered only a small portion of the district in any serious detail, was that I reported that the district was undoubtedly one of very large tonnage, and that it would pay to include it as one of the major iron ore districts of the United States in the series of reports. On the other hand I recommended that this work be laid over until large scale topographic maps were available for the geologic field parties, because the Texas geological survey in its report had included actual instrumental surveys of the various iron ore fields, and I felt that we could not afford to do worse work in the line of mapping than the State survey had done. This recommendation has been renewed each year by various geologists, but the pressure of applications for work in other areas has so far prevented any detailed report from being published.

Q. You have told us that ten or fifteen thousand square miles was the area of the iron bearing district, was that it?

A. That is the area within which the workable iron ore deposits are grouped.

Q. How many square miles of that are actually ore bearing territory?

MR. DICKINSON: Before he answers that I would like to object to his stating anything based upon reports of the surveyors as secondary evidence.

THE WITNESS: The actual surveys of Mr. Kennedy and others that were published officially by the Texas Geological Survey showed that approximately 1,000 square miles of territory within this general area were covered by iron ore deposits of one sort or another.

By Mr. Reed:

Q. Now, I want to get down to the exact results of your own investigation, and I wish that you would begin by describing the manner in which this ore is deposited; give us some idea of the appearance of the region.

A. The iron ore district of northeast Texas is underlain by a series of soft beds, clays, sands and other soft materials.

These beds are of comparatively recent age. They lie almost horizontally, and dip very slightly toward the Gulf of Mexico; and the region itself is essentially still a large plateau, cut into by small streams. Within the iron-bearing area the top of each plateau that I have seen is either covered or underlain immediately by brown ore. The brown ore occurs as masses of considerable size, grading from that down to finer material. In places these masses have been cemented together by iron oxide so as to form flat pieces of iron ore of considerable size.

Q. What overburden is found on this plateau of iron ore?

A. In most cases the iron ore occurs at the ground surface, because its hardness is superior to that of the beds below it and of the beds which were above it. In a few places there is a deposit of fine sand, and in places of earth covering the iron ore. The overburden I should say, over a great part of the area, is zero, and over the remainder it may vary from five or six inches of such sand and dirt up to two or three feet. So far as I know, it never exceeds the latter figure.

Q. The stripping would not be a difficult matter, then?

A. Stripping would not be a difficult matter at any place, Mr. Reed.

The district has been operated at intervals since the acquisition of Texas by the United States, and during the Civil War it was quite an active iron-producting district. The State of Texas until recently still had a single furnace at the State Penitentiary at Rust, operated by convicts and politicians, which was not very successful.

Q. I suppose that this plateau is cut through by these streams that you spoke of?

A. Yes. That is the only difficulty in operation in the district. Each section of a plateau has to be considered as a

single operation, when the work is being carried on for a small furnace or on a small scale, because it would not pay to bridge these gulleys at intervals for the steam shovel to cross from one plateau to another.

Q. In these gulleys is the edge of this plateau of ore exposed in such a manner that you get an idea of its thickness?

A. It is exposed throughout wherever there is a stream in it or a gulley of any kind; and that is the only point which deserves attention with regard to estimates. The ore bed itself, as far as can be determined, is rarely less than two feet thick, very rarely much above three or four feet thick. In some places along the streams the iron ore stratum has projected until the waters have cut away the soft beds beneath it, and when that happened, the iron ore mass simply fell over the edge of the gulley, and in some of the promotion reports we have very exaggerated estimates of thicknesses, 25 or 35 feet thick. Personally, my memory is that the thickest I saw there in a real excavation was some 15 feet.

Q. You examined some of the excavations also that had been made into the ore?

A. Oh, yes; I examined practically all of the three or four northern counties; all of the excavations and workings that had been made in the three or four northern counties.

Q. Tell us something about the grade of this ore. How does it run in iron?

A. The ore is naturally a very high grade brown ore. There is no place in the district, so far as I know, at which it would be necessary to install a washer to prepare the ore for market. The material which is associated with it is almost invariably a fine sand, which could be separated by simple screening, and as a matter of fact, that is the way in which all the ore which has been used in Texas has been handled so far. The product after such screening would be a series of lumps and pebbles of brown ore. When analyzed, after such work has been done, the average grade, as determined by several very large series of analyses, is in the neighborhood of 48 per cent. iron, which is comparable strictly with the brown ores which we now mine in Alabama, and far above those which we mine in the Oriskany district of Virginia.

Q. Are these ores Bessemer or non-Bessemer?

A. They are non-Bessemer, as is usual with brown ores.

Q. Are they now being mined in any place?

A. I am informed that they are, Mr. Reed, but I have not been there since the new large scale work has been taken up.

Q. Do you know anything about the East Texas Brown Ore Company and its operations?

A. Simply from what I have heard.

Q. Only from hearsay?

A. Yes, sir.

Q. You have not seen any of the operations?

A. I have not seen any of the operations. I have discussed their rates with the railroad which proposes to handle part of the project.

Q. Is there a railroad through this Texas district?

A. At the time of my visit there were two railroads which crossed the portion of the district which I visited, I believe the Texas Pacific and the International & Great Northern though I am not entirely sure of that routing.

The shipments now are coming over the Atchison, Topeka & Santa Fe to Port Bolivar.

Q. That is the present route that the ore is following to tidewater?

A. On the shipments to Philadelphia which have been made in the last year or so, that is the present route.

Q. How much, how many square miles of this plateau of ore lie adjacent to the present railroads?

A. In the portion of the area which I saw there must be 40 or 50 square miles strictly tributary to railroads. In the entire district the area which could be reached by short tap lines would be possibly three or four times that amount, but I cannot answer except for Cass and the adjoining counties.

Q. What estimate of the tonnage tributary to the present railroads can you give us, Mr. Eckel?

A. Within the area of 50 square miles which I have suggested as being tributary to the railroads in Cass and the adjoining counties, I place the tonnage of workable brown ore at some 250,000,000 tons.

Q. What percentage of the whole of the Texas district does that constitute?

A. That is not over one-fifth of the Texas district, but I believe that in tonnage, to judge from the Texas reports, which are our sole source of information regarding the southern part of the district, the Cass County field is the most important portion of the area, and I should say that the 250,000,000 tons which I have quoted for that part of the area is at least one-third and possibly one-half of the total tonnage in the entire northeast Texas district.

Q. I see. Have you studied the cost of mining and screening, and transportation by rail and water, say, to Philadelphia?

A. With regard to the Texas brown ores?

Q. Yes.

A. I have.

Q. At what price per unit can those ores be delivered at Philadelphia?

A. Between $2 and $2.50 per ton of iron, which is equivalent to——

Q. (Interposing.) Per ton of iron or ore?

A. Per ton of iron ore, which is equivalent to from 4½ to 5 cents per unit of iron.

Q. Is that a price at which such ores can compete with Lake Superior ores at Philadelphia?

A. The Lake Superior ores do not reach Philadelphia, normally, Mr. Reed. I may say that the plan for operating these ores, with which I was made acquainted, involved in part a shipment of the ores into the Pittsburgh district in competition with Lake ores.

Q. As a matter of fact, Lake ores are very seldom brought as far east as Philadelphia now, are they?

A. So far as I know, no company east of Johnstown is running on Lake ores during normal years.

Q. I see.

A. We use occasional shipments in Virginia, when pig iron is sufficiently high to pay to handle Lake ores.

Q. Now, Mr. Eckel, have you made any study of the ores

of the Adirondack region, in the State of New York?

A. Yes, Mr. Reed.

Q. What occasion had you for making an examination of those ores?

A. I have examined portions of that district at various times and for very different reasons. During my connection with the New York State Geological Survey, I was engaged in mapping the boundaries of the ore-bearing region, and visited most of the mines. Later I have examined, I believe, all of the working mines for private individuals or for corporations. In one case, I have had the entire property turned over to me, with the idea of determining whether to continue operations or to drop it or to acquire new land. The bulk of my work, so far as tonnage estimates on working properties are concerned, has been done since I left the New York State Survey, but my knowledge of the geology of the region, of its area and of the general relations of the working deposits to the undeveloped deposits, was gained while I was on the State Survey.

Q. You have been at Port Henry, have you, and at Mineville?

A. I have been at Mineville, using that term in a general sense to cover a number of mines in that district. I have been at Arnold Hill, which is probably in reality the largest property in the Adirondacks. I have been at Clayburg, Lyon Mountain, at Benson, and at Salisbury, Herkimer County. I have also been in the red hematite district which occurs in the Adirondack area, but that work was done for the United States Geological Survey some years ago.

Q. Will you state, Mr. Eckel, whether any part of your examination of the Adirondack region was for the United States Geological Survey?

A. Except in the case of the Antwerp, Rossie and Sterling mines I do not think any of my visits there were for purposes connected with the United States Geological Survey.

Q. You did visit those mines for the Survey, did you?

A. I did in connection with the examination of the pyrite deposits in the Adirondack region.

Q. Mr. Eckel, I call your attention to Defendants' Exhibit 106, and I ask you what that is?

A. That is a map of the magnetic iron ore regions of New York, New Jersey and Pennsylvania.

Q. Under whose direction was that prepared?

A. That was prepared in this office by a draftsman acting under my direction.

Q. What was the model or original from which that map was drawn?

A. The portion of the map showing the State of New York was taken by the draftsman from a sketch map which I prepared, reduced from the five miles to the inch official map of New York, published in 1900 or 1901 by the New York State Geological Survey.

Q. How were the limits of the magnetic ore lands defined? Did you fix them for the draftsman?

A. They were copied by the draftsman from the sketch map to which I have referred, which in turn had been reduced by me from the official geologic map of the state.

Q. What original or model was the map of New Jersey and Pennsylvania taken from?

A. The map of northern New Jersey was in part taken from the same sketch, for a portion of that state was included in the original New York map. The outlines of the pre-Cambrian or magnetic iron ore regions of New Jersey and Pennsylvania were placed upon this map based upon my knowledge of the geology of those states. This general knowledge was checked up by Mr. John Birkinbine, who was familiar with the locations of the iron ore deposits in eastern Pennsylvania, and by Mr. Frank Nason, who was thoroughly familiar with the location of those in New Jersey and southeastern New York.

Q. The whole map was prepared under your direction and expresses your knowledge?

A. The entire map was prepared under my direction and it expresses my knowledge of the area covered; so far as it relates to New York the boundaries and other data that are presented are absolute copies of the official record.

Q. Do you know them to be correct?

A. I know them to be correct. So far as relates to New Jersey and Pennsylvania the map is correct within the necessary limits of accuracy in this case, to the best of my knowledge and belief.

MR. REED: We offer in evidence Defendants' Exhibit No. 106.

MR. DICKINSON: That is objected to as not sufficiently proven, and as based upon data not shown in evidence, and as secondary and incompetent.

(The paper referred to was thereupon marked "Defendants' Exhibit (Eckel) No. 106, October 1, 1913," and will be found in the volume of exhibits.)

By MR. REED:

Q. In the shaded area in the northern part of New York state I notice a cross barred or cross hatched district. What does that represent?

A. The cross-hatched area in the northeastern part of New York State is an area of basic igneous rocks consisting of gabbros, etc., within which large deposits of titaniferous magnetite are known to occur. This area has been shown separately, because, so far as I know, there is no reason to expect the occurrence of non-titaniferous magnetite within this area, and it would not be fair to give this gabbro area the same present day commercial importance as the area shown as containing probable commercial iron ore.

Q. What is the balance of the shaded area in the northern New York region?

A. The area in northern New York which is shown by close parallel shading oblique to the edges of the map is an area of pre-Cambrian rocks of various types; gneisses, schists and crystalline limestones predominating. Within this area deposits of magnetic iron ore are known to occur in very large quantity, and similar deposits may reasonably be expected throughout the entire district.

Q. What part of that area has been explored?

A. The entire area of pre-Cambrian rocks in the Adirondacks, excluding the area shown by cross-hatching; that is to say, the area within which non-titaniferous magnetites may

reasonably be expected to occur is 8,000 square miles, as determined by actual scaling from the official map. Within this area four important working deposits occur on properties aggregating 183,000 acres, or 300 square miles; about one-twenty-seventh of the area has therefore been examined in very close detail.

Q. Where are the most important deposits of commercially available iron ore in that area?

A. The most important producing group at the present day is in the east central portion of the area within a few miles of Lake Champlain, at and near the point marked Mineville on the map.

Q. What other important deposits have been developed?

A. The second largest shipping deposit in the Adirondacks, though probably at present the largest in point of developed tonnage, is the Lyon Mountain deposit in the northern portion of the area.

Q. And what other points have been developed and are shipping ore?

A. The Benson mines in the western portion of the Adirondacks, the Arnold Hill and adjoining mines in the northeastern portion, and a number of smaller mines which are shown but not named on the map have produced ore within the past ten or fifteen years, and several of them are producing ore this year.

Q. Have you made an estimate of the tonnage of presently available ore at Mineville, Arnold, Clayburg, Lyon Mountain and Benson?

A. No, I have not made an estimate covering all of those properties. I have not made a personal estimate covering all of those properties.

Q. Will you tell us what estimates of presently available ore you have made for the Adirondack region or any part of it?

A. I have made estimates based upon personal examination of the Benson and Lyon Mountain properties, as well as of the Salisbury, and one or two of the smaller properties.

With regard to the Arnold and Mineville properties, I have heard Mr. Nason's testimony with regard to those sub-

jects, and I have had an opportunity of not only going over the properties, but of seeing portions of a report which he prepared for other interests in connection with that work.

Q. I am asking now solely as to estimates that have been made on your own personal investigation and studies. You have examined the Lyon Mountain operations recently, have you?

A. I have; within the past year.

Q. Have you made an estimate of the quantity of presently available iron ore contained in that mountain or in that deposit?

A. The Lyon Mountain property of the Delaware & Hudson Railroad is a very large property, and only a fraction of it has been developed by deep-level work. There is, however, one strip 4,000 feet in length within which the principal workings are located, and which is developed in such a manner by actual openings as well as by drill holes that an estimate on its tonnage would be accepted by any firm wishing to purchase the property. I would consider this strictly developed ore, and the tonnage within this area will amount to at least 20,000,000 tons.

In addition to the ore just named, which is now practically in sight, there is an equal tonnage indicated by drillings within a few thousand feet of the developed mines. This additional tonnage would be classed as probable ore in any commercial investigation of the property. Further than this, there are a series of openings extending over four and a half miles, which, from geological indications, supplemented by test pitting and drilling which has been done, seem to indicate the existence of a practically continuous ore body over that distance.

The tonnage of an ore body shown in this fashion cannot be regarded as proven with certainty, but it would certainly be a factor in the sale or purchase of the property.

This tonnage of undeveloped but still probable ore will carry the total probable tonnage on the property to something in the neighborhood of 150,000,000 tons.

Q. What is the quality of that ore? Of what grade is it?

A. The crude ore, as is usual in the Adirondacks, is low-

grade natural. The magnetic ore of the Adirondacks is composed of grains of magnetite in a matrix of quartz, in places, and of lime phosphate in others, and the ordinary workable grades in the Adirondacks contain, in their crude state, from 22 to 35 per cent. of metallic iron.

In the Mineville district and in the Arnold Hill district there are relatively large tonnages well above this grade, but in the Lyon Mountain district the ore which has been actually used and converted into pig iron varies in percentage from 28 to 33 per cent. or thereabouts of metallic iron in its crude condition.

Q. How is that treated, Mr. Eckel?

A. It is crushed and concentrated on magnetic concentrators, so as to give a final product grading between 60 and 63 per cent. metallic iron, with extremely low phosphorus, ranging in the neighborhood of .007, or far below the Bessemer limit.

Q. Are some of these ores low in phosphorus naturally?

A. The Lyon Mountain ore is naturally low in phosphorus. There is no lime phosphate in connection with the magnetite in the crude ore.

Q. Where these Adirondack ores do run higher in phosphorus, is that phosphorus largely eliminated in concentration?

A. Practically every fraction of the phosphorus can be eliminated from any of the granular magnetites of the Adirondacks, and eliminated at a cost which does not make the removal prohibitive.

Q. Now, are these ores from Lyon Mountain, when concentrated, cheap enough to compete commercially with the Lake Superior ores at any point?

A. The Lyon Mountain ores this season are being used in the Standish furnace, within a few miles of the mines. The pig iron from Standish, of course, competes with Pittsburgh pig iron. At other times shipments have been made from Lyon Mountain to eastern Pennsylvania points.

Q. We will come back to this question of shipments for commercial use, later; but first, I wish you would tell us about the depo its at Benson. When did you examine them?

A. I examined the Benson deposits in June, 1913.

Q. Had you known them before that time?

A. I had known of their existence, and of the fact that it was one of the largest open cut mines in the country; one of the most interesting concentrating operations in the United States, for several years, but I had never had an opportunity to get in there.

Q. Is that property now working?

A. That property was working when I was there, Mr. Reed, and I have no idea it has shut down now.

Q. How long has it been working, if you know?

A. I believe Benson was first operated five or six years ago. It is one of the recently discovered properties, which are only available now because of the improvements in magnetic concentration.

Q. Is this property being largely worked?

A. I do not know what their shipments amount to now.

Q. Is it a large plant?

A. It is an enormous property, but I am not sure about the scale on which the shipments run. This is not exactly a year in which you can ship more iron ore than you can mine.

Q. What can you tell us as to the quantity and the grade of this Benson ore?

A. The Benson mine is an entirely different type of deposit, so far as extent is concerned, from anything in the Adirondacks or elsewhere, so far as I am acquainted with magnetite ores. The main quarry—for it is entirely a quarrying operation—is opened on a bed of ore which has a surface width of approximately four hundred feet. Its extent along the strike, so far as it has been developed or can be seen at present, is some 6,000 feet. The workings are now down as an open cut possibly 50 to 150 feet, in different portions of the quarry, and drill records show that the ore maintains its thickness and grade to a depth of at least 1,000 feet. On geological grounds there is no reason to suppose that it does not persist to a still greater depth, and the entire question is one of operating cost and market conditions.

Q. How deep is this being mined now?

A. There are no underground mining operations on the

Benson property. It is worked as an open cut quarry, which, as I say, varies in depth from 50 to 150 feet. The quarry is now several hundred feet wide and five or six hundred feet long.

Q. What can you tell us as to the quality of this Benson ore?

A. The Benson ore grades about like that at Lyon Mountain, so far as iron content is concerned, but is somewhat higher in phosphorus. At present I do not recall the exact phosphorus percentage, but the crude iron grade would be in the neighborhood of 30 to 35 per cent. over the entire face of the quarry, though there are points twenty to thirty feet thick which, if mined separately, would yield 45 per cent. ore.

MR. REED: It is four o'clock now, and if it is agreeable to you, Judge, we will adjourn until Tuesday morning.

MR. DICKINSON: Very well.

(Whereupon an adjournment was taken until Tuesday, October 14, 1913, at 10:30 o'clock a. m.)

NINETY-FOURTH DAY.

EMPIRE BUILDING,
71 Broadway, New York City.

Tuesday, October 14th, 1913.

Before Special Examiner HENRY P. BROWN.

Present on behalf of the United States, MR. DICKINSON and MR. COLTON.

Present on behalf of the Defendants, MR. LINDABURY, MR. SEVERANCE, MR. BOLLING and MR. REED; also, on behalf of the Great Northern Iron Ore Interests, MR. CHESTER W. CUTHELL.

EDWIN C. ECKEL,

the witness under examination at the taking of adjournment, resumed the stand for further examination:

DIRECT EXAMINATION (Continued)

By MR. REED:

Q. When we adjourned on Friday I was asking you about the reserves at Benson in the Adirondack region and you had described the nature of the workings at that place, but had not yet stated your estimate of the tonnage of merchantable ore in that deposit, and I wish, if you have made such an estimate you would state what tonnage you believe to be there?

A. At the Benson mine, to base estimates on the surface area which is exposed and proven, the tonnage of concentrates would amount to almost exactly ten million tons for each 100 feet in depth. If the operation should be continued entirely as an open quarry, it would probably not be safe to assume that more than twenty to thirty million tons of concentrates could be obtained from the material so extracted. If the ore be mined to the depth shown by drilling, that is to say, to 1,000 feet below the present ground surface, the total tonnage of concentrates obtained would be about 100,000,000 tons.

This statement applies solely to the property of the Benson Iron Mines Company, and not to the district as a whole, because that has not been developed to any large extent, though small openings are found at intervals for a number of miles around Benson.

Q. Have developments in these surrounding districts progressed to a point at which any estimate is practicable?

A. No estimate of the same grade which I have made for Benson or Lyon Mountain.

Q. The same grade, you mean the same degree of accuracy?

A. The same degree of accuracy.

Q. In giving us your estimates for the Lyon Mountain deposits as you did on Friday, and your estimate of the Benson deposits this morning, are you stating tonnages of crude ore in each case or of concentrates in each case?

A. In each case I have stated the tonnage of concentrates which would be recovered from the crude ore. In doing this I have estimated that 25 cubic feet of crude ore in the ground will yield one ton of concentrates. As a matter of fact, with milling practice on the same grade that is carried out at Mineville, it would yield something more than that, because the recovery at Mineville is close to 98 per cent. of the ore.

Q. Are there any other districts in the Adirondack region in which your personal investigation has progressed to the point of enabling you to make an accurate estimate of their tonnage?

A. There are only two additional regions, or rather properties; neither of these is very large. I have examined the Salisbury property in very great detail, and the Clayburg, along the Saranac River, in somewhat less detail. The two districts together would probably not add more than twenty-five to thirty million tons of concentrates to the total.

Q. How much attention have you given the deposits of Arnold and Mineville?

A. I have been over those areas. I have examined the old workings, which were very extensive at Arnold, and have to some extent traced the course of the ore where it is not exposed in the workings. At Mineville I have visited a large

number of the workings primarily with the intention of trying to find out how continuous the ore was in the outcrop, because the question of thickness is one which can be ascertained only by drilling. I have not been in a position to make an independent estimate of the tonnage in either district, because, though the fact has not been brought out in this testimony, both the Mineville and Arnold districts are rather large; they have many scattered openings, and in each case there are from two to five or six separate ore bodies involved in that question.

Q. Is your information such that you can give us any conclusion as to the total tonnage available in those districts?

MR. DICKINSON: I object to that, as it calls for a conclusion based upon information undisclosed, which the question does not call for being disclosed by the witness, and therefore the basis of his judgment is not such as to be made the subject of cross examination.

THE WITNESS: In answering that question I would say that I have checked over certain statements and estimates made by Mr. Frank Nason, in the course of a very detailed examination of those properties.

MR. DICKINSON: That is objected to as hearsay, secondary and incompetent.

THE WITNESS: If I were acting for a purchaser of the Witherbee-Sherman properties, I would accept those estimates without any question. The question whether that evidence is sufficient is a matter of purely professional opinion, and is based upon my judgment of the type of deposits with which Mr. Nason had to deal, on my knowledge of the detail in which he examined those deposits, and on my knowledge of his standing as a mining engineer.

By MR. REED:

Q. Your conclusion would be based on all of those elements, would it?

A. Just as if I were dealing with a commercial matter, Mr. Reed.

Q. I see. Now, I want to ask you about the utility of these

Adirondack ores. Have you examined any of these concentrating plants?

A. Yes, Mr. Reed. I have been through three or four of them.

Q. Have you studied their operation?

A. At Salisbury, Mr. Reed, I studied the operation of the mill—the operation and costs of the mill in detail, because the matter had been placed in my hands to determine whether or not to continue the operation of the mine. At the other mills, I secured records of the grade of ore which was being treated, and of the type of concentrates which were being produced. In addition, I made some inquiries as to costs, but this information, of course, is more general than the information as to ore grades, which were taken from working records.

Q. They use a species of magnetic separation, do they not, in those concentrating plants?

A. Yes. The ore is crushed to various degrees of fineness. The fineness to which it is necessary to crush it is determined by the character of the ore in each particular locality, and it is that question which really makes the local differences in cost and practice throughout the Adirondacks and elsewhere. Some ores can be concentrated satisfactorily with relatively coarse crushing, while others require so fine crushing as to be expensive products.

Q. Is the phosphorus content of the concentrate the same as that of the natural ore, or is it different?

A. No. The phosphorus content of the concentrate is sharply reduced from that of the natural ore in each case where lime phosphate happens to be one of the constituents of the crude ore.

Q. Is that common?

A. That is the case entirely in the Mineville and Arnold Hill districts. It is the case to some extent at Benson and at Salisbury. At Lyon Mountain it is not the case.

Q. Do the Lyon Mountain ores run high in phosphorus?

A. No, the Lyon Mountain ores are naturally very low phosphorus ores—far below the Bessemer limit, but concentration does not materially change them in this respect.

Q. They are Bessemer to start with?

A. They are absolutely Bessemer ores.

Q. And the concentrates are Bessemer, too?

A. The concentrates will range from .006 to .008 in phosphorus.

Q. In the other districts are the concentrates Bessemer or non-Bessemer?

A. That depends entirely on what they wish to place on the market.

Q. Suppose they wish to make Bessemer ore.

A. If they wish to make Bessemer ore, they can do so in every one of the districts. It would be very easy at Mineville and at Arnold Hill, but somewhat harder at Salisbury and Benson.

Q. How will these concentrates run in iron content, Mr. Eckel?

A. That is again entirely a matter of economic practice. At most of the mines it is found more satisfactory to concentrate the ores until they reach a shipping grade of from 60 to 63 per cent. metallic iron. As shown by work at Mineville, it is entirely feasible to concentrate ores until they carry over 70 per cent. of iron, but for ordinary commercial use, the grade of product shipped will probably fall in the neighborhood of 60 to 63 per cent metallic iron.

Q. Can such concentrates be produced economically? That is, produced at such a cost as will enable them to compete with ores from other districts at any point?

A. Of course it would be possible to make very close estimates of the cost of mining and concentrating in each of these districts, but the most satisfactory information on the subject is really afforded by the fact that such concentrates are regularly mined and shipped, and enter into competition with foreign ores along the seaboard, and with lake ores at Buffalo and at a few points in central Pennsylvania.

Q. Tell us some of the points at which these Adirondack ores are now being smelted.

A. There are now two local furnaces; one at Standish and one at Port Henry, which take a certain proportion of the

Adirondack ore, but the Port Henry furnace runs on lump ore.

Q. That is natural ore?

A. That is natural ore.

Q. As distinguished from concentrate?

A. Without concentration. In addition to this relatively small local consumption of the ores, heavy tonnages are shipped annually into the eastern Pennsylvania and northern New Jersey districts, as well as to the furnaces and steel plants in the Buffalo-Tonawanda district. Less commonly the Adirondack ores have reached much farther west; for example, the Benson mine at one time shipped into the Ohio district, and very frequently shipments are made to Pottsville and Pottstown in Pennsylvania. Those are the normal limits of the Adirondack ore market area.

Q. Now, how long has this been going on, Mr. Eckel? Is this just a recent development?

A. The Adirondack ores have been mined and furnaced for somewhat over 100 years. The extensive shipment of ores and concentrates into Pennsylvania probably does not date back for more than 20 or 30 years.

Q. Are there any improvements in transportation either by rail or water which would materially affect the radius within which these ores can be shipped?

A. At present all of the tonnage shipped from the Adirondack region, with the exception of small shipments occasionally made down Lake Champlain into Canada leave the mines by rail and are handled for almost their entire distance by rail. With the completion of the New York barge canal and of the Lake Champlain Hudson River Canal it is assumed that over half of the Adirondack tonnage will be shipped by water.

Q. Are those canals shown on Exhibit 106?

A. Those canals are shown on Exhibit 106 as black lines with regular heavy black dots at short intervals, in order to distinguish them from the course of the Hudson river itself, which is shown as a black line without those dots.

Q. Is the rate of transportation from the Adirondack district to New York harbor by way of this water route known?

A. One of the mining companies has already prepared plans and estimates calling for shipments by this route. The rate at which contracts have been offered is in the neighborhood of 35 cents per ton for shipments to docks in New York harbor. This will practically cut the through rate from the Adirondacks to eastern Pennsylvania points in half.

Q. Is that the rate from the mines to the docks in New York, or is there any additional rail haul to be put on that?

A. The only rail haul in the case of the company in question from whichever group of mines the shipments may be made, is a haul down from the mines to the docks on Lake Champlain. It amounts, in each case, to a haul of from ten to fifteen miles by rail, according to the particular mine from which shipments are being made. In one case this shipment is entirely over a railroad owned by the mining company, and in the other case it is over a common carrier.

Q. The figures you give us, then, are simply for the water haul?

A. They are simply for the water haul.

Q. Mr. Eckel, in giving these estimates of Adirondack ore have you considered ores other than those now being commercially exploited?

A. No. The only estimates that I have made are based on the tonnages which are now practically developed in several of the producing districts. There are, undoubtedly, large tonnages scattered over the remaining iron bearing portion of the Adirondacks.

Q. How about these titaniferous ores? Is any effort being made to develop them now?

A. A shipment of about thirty thousand tons was brought out this year for use at Bethlehem, Pennsylvania. That was purely a trial shipment, and future shipments will depend on the success with which the ores are used at the Bethlehem plant. The tonnage, of course, has been known from the earliest days, to be very large.

Q. How do these titaniferous ores run in iron?

A. They are exceptionally high in iron.

Q. About what?

A. The average grade in the Lake Sanford deposits would

be probably between 60 and 65 per cent. iron, in natural condition.

Q. Where is Lake Sanford?

A. It is located within the area shown by cross-hatching in Exhibit 106.

Q. Why have titaniferous ores not been more generally used in the past? Is that because the presence of titanium introduces a metallurgical difficulty?

A. The presence of titanium in an ore introduces a metallurgical difficulty whose extent has been almost invariably overrated. As a matter of fact the Swedish iron, which has for several hundred years been the standard pure iron of the world was largely made from titaniferous ores. The difficulty involved arises from the fact that when titaniferous ores are handled in the blast furnace the slags made, unless special care is taken in the preparing of the burden, are apt to be less fusible and flow less readily than those made when ores not containing titanium are smelted.

Q. As far as the titanium itself is concerned, is that a detriment or an advantage to the steel that is made from this iron?

A. Practically all the titanium remains in the slag, and the trace which is carried over into the iron would be a distinct advantage for many uses in the steel trade.

Q. So far as the quality of the steel is concerned, if I understand your answers, the titanium is more of an advantage than a disadvantage, but it causes some trouble in the original smelting in the furnace, due to the fact that it tends to thicken the slags? Is that correct?

A. That would be a fair summary of the case, Mr. Reed, with the exception of the fact that the titaniferous ores are characteristically exceptionally low in phosphorus, so that if the difficulty as to slag composition can be overcome, they offer another very distinct advantage over the normal magnetites.

Q. As a matter of fact, ferro-titanium is very often added to the charge in the open hearth furnaces, is it not, in steel making?

A. I believe that it is for some special purposes.

Q. Are you able to give us any idea of the aggregate quantity of these titaniferous ores that run so high in iron and so low in phosphorus? I mean, of course, those within the Adirondack district?

A. It would be difficult to attempt an estimate of those ores because of the areas which are involved in the question. At the Lake Sanford deposit, for example, the ore is exposed practically continuously for half a mile in width and several miles in length. Drill records which I saw this year show that the ore body is from 300 to 400 feet thick and the drill stops still in ore. No one who has ever discussed the titaniferous iron ores of the Adirondacks has placed the tonnage below several hundred millions of tons of ore naturally available. The entire difficulty has been one of inducing American furnace men to use the new product.

Q. Have there been any further efforts that you know of toward the development and utilization of these titaniferous ores at the present time?

A. A very extensive series of experiments were carried out by Mr. Rossi for a number of years, which seem to have been entirely successful technically. At present I do not recall, with the exception of the shipment that I have mentioned, that any attempt has been made in New York State to handle these ores.

Q. You do not know of any project backed by New York capital, do you, in connection with that work?

MR. DICKINSON: That is objected to as incompetent and irrelevant.

THE WITNESS: I do not recall anything, with the exception of the actual shipment that I have mentioned. That, of course, if successful, would involve further development of the Adirondack ores.

By MR. REED:

Q. Now, Mr. Eckel, let us take the Newfoundland region. Have you been in Newfoundland?

A. I have.

Q. When?

A. I was in Newfoundland during the most of June and July of this year.

Q. For what purpose did you go to Newfoundland?

A. I visited Newfoundland primarily to make a detailed study of the iron ores in Conception Bay.

Q. That lies on the eastern part of Newfoundland, does it?

A. That lies near the southeastern angle of Newfoundland.

Q. Did you visit the mines in the Conception Bay district?

A. I visited practically all of the workings in the Bell Island or Conception Bay district, and in addition, examined a large amount of outcrop beds which are now being worked.

Q. At what point is the outcrop of this Conception Bay ore being attacked?

A. The ore lies in a trough pitching northeastward, and its outcrop extends along the north side of Bell Island. This is an island about six miles long and two miles wide, located in Conception Bay.

Q. How far from the mainland of Newfoundland?

A. The nearest point on Bell Island is possibly three or four miles from the shore of Conception Bay. The bay itself is a long, narrow fiord, and the island is not more than a third of the length of the bay out from the shore.

Q. A third of the width of the bay or the length?

A. The length.

Q. Those mines that are at present working, you say, are located on Bell Island?

A. Some of them are. The largest single shipping mine is located under the waters of Conception Bay.

Q. Where does its shaft open?

A. It is operated by a slope which opens on Bell Island itself.

Q. Now, I wish you would describe the manner in which those ores are deposited.

A. With the exception of a slight difference in geologic age, these Bell Island ores are closely similar in origin to the red or Clinton ores of the Birmingham and other American districts. That is to say, they were originally deposited

as sedimentary beds associated with shales, sandstones, and so forth. The ores occur in a number of distinct beds, three of which are worked at present.

Q. Are these beds fairly regular and continuous?

A. They are very regular along the outcrop, but they thicken gradually down submarine slopes, which is a practical demonstration of the fact, already established on geologic grounds, that the original center of the ore-bearing trough lies some distance to the northeast of Bell Island.

Q. Are those beds faulted very much?

A. There are a number of faults which have been encountered in the workings and are shown at various points on Bell Island itself. The throw of the faults is not very great; with one exception not over 20 feet, and the aggregate result is that there is a slight difference in the dip of the ore body.

Q. What is the dip of the ore body at the outcrop?

A. At the outcrop the dip of the ore body ranges from seven to eight degrees. This dip is, of course, so slight that it cannot be determined exactly by instruments, though I took a number of readings on it, and I am sure that it falls somewhere between five and ten degrees; but, as a matter of fact, it is possible to check it up by actual measurement and by comparison with the mine workings over large distances.

Q. Is that dip maintained or does it increase or diminish with the depth of the workings?

A. The dip is practically unchanged to the foot of the deepest slope. It is to be expected on geological grounds that within some distance to the northeast of the present slope the dip will begin to flatten, and that ultimately the ore beds will be found in a horizontal position.

Q. From what you have told us, I infer that this Newfoundland deposit resembles to a great extent the deposit at Birmingham. Is that correct?

A. With the exception that the ores are very much higher in grade, and the ore beds are very much thicker.

Q. Which beds are thicker and which ore is higher in grade?

A. The Newfoundland ore averages about 52 to 53 per cent. metallic iron, as compared with 33 to 36 per cent. at Birmingham, and the three ore beds together yield a workable thickness of thirty feet of ore in Newfoundland, as compared with a maximum working thickness of nine to ten and one-half feet in the Birmingham district.

Q. Now, Mr. Eckel, what reasons are there, if any there be, for assuming that these Newfoundland ores are deposited over a large area, and what reasons are there, if any, for assuming that the ore will continue of the present grade and of the present thickness?

A. That is a question which can be answered only on geologic grounds, but on those grounds it can be answered with a very high degree of certainty. The Newfoundland ores are undoubtedly of sedimentary origin, as is shown by their associations and the fossils contained in them. The ores, further than that, were deposited not in a small fresh-water lake or pool, but in a marine basin. Further than that the fossils found associated with these ores are of a type which indicates that the basin opened toward the Atlantic and not toward the American continent. This point, which is of importance in connection with this matter, has been passed upon by the two leading authorities on that subject, and may be accepted as determined. In addition to this, we have the confirmatory evidence of the slopes and workings themselves. As I explained, these merely confirm the geologic evidence which, even without the sinking of the Scotia slope, would have been sufficient to have made the probabilities as to submarine ore deposits very definite.

Q. How far has that Scotia shaft gone down along the dip of the vein?

A. The Scotia slope is—the foot of the Scotia slope is now 7,374 feet from high water mark, measured horizontally. The slope starts at a distance of approximately 1,500 feet back from high water mark. The total horizontal distance is therefore in the neighborhood of 8,900 feet, and the total slope distance would probably be a little over 9,000 feet—the total distance measured on the slope.

Q. How deep is the water over the foot of this slope?

A. 266 feet.

Q. How deep below the bottom of the bay at that point are the workings?

A. 1,337 feet.

Q. In other words the workings are about 1,600 feet below the level of the bay?

A. I beg your pardon, Mr. Reed. The workings——

Q. (Interposing) That is within one foot of it, if your figures are correct.

A. The workings are 1,071 feet below the bottom of the bay. The total distance from the water level to the foot of the workings vertically is 1,337 feet. I had misunderstood your question at first.

Q. What is the character of this intervening material between the bottom of the bay and the workings in the iron vein, generally speaking, of course?

A. The workings are—the largest workings are in the lowest of the three beds, so that some 300 or 400 feet of the material above the workings is very definitely known. It consists of shale, sandstone and iron ore. The material above that is not known with the same degree of certainty.

Q. Mr. Eckel, is there any physical or engineering difficulty of magnitude to prevent the mining of this ore from underneath the sea?

A. None whatever, Mr. Reed. It is being mined to-day on a very large scale.

Q. What company is mining it?

A. The Nova Scotia Steel & Coal Company is mining ore from the sub-marine areas.

Q. What other company is mining on Bell Island, if any?

A. The Dominion Iron & Steel Company, a subsidiary of the Dominion Steel Corporation, is mining ore from open cuts and underground workings on Bell Island itself. It also has a number of submarine areas, and will shortly take up submarine operations.

Q. You were down in this submarine mine, were you?

A. I was.

Q. Is there anything there to indicate that the limit of depth has been reached, or that the workings cannot be carried on still further under the sea?

A. There is nothing to indicate that the working limit is anywhere near being reached. The fact that there is water over the top of the mine instead of ground does not involve any serious added difficulty. The thickness of the ore, as I have said, is increasing slightly, and at present they are loading ore from the face with an electric shovel, so that the working difficulties are decreasing rather than increasing, at present.

Q. Do they have much water to pump from those workings?

A. Practically nothing from the face.

Q. And what they do get at the face, is that salt or fresh water?

A. That is fresh water.

Q. The sea has not broken in yet, has it?

A. Not yet.

Q. As to the quality of this ore, you have said it runs something over 52 per cent. in iron; is that what you said?

A. I think I said that. The average shipments over a number of years are close to 52½ per cent. metallic iron, on a dry basis.

Q. Does this ore carry much moisture?

A. It carries from one-half of one per cent. to three-quarters of one per cent. of moisture; so that in the natural condition it will grade about 51½ to 51¾ per cent. metallic iron.

Q. Is it Bessemer or non-Bessemer ore?

A. It is not an acid Bessemer ore; it is a basic Bessemer ore, though it is also used in the United States and Canada in the basic open hearth furnaces.

Q. In saying that it is a basic Bessemer ore, you mean it is suitable for use in the basic Bessemer process as it is used in Germany, for instance?

A. As it is used in Germany and in England.

Q. Basic Bessemer is not used much in this country, is it?

A. Basic Bessemer has never reached much development

in the United States, owing chiefly to the fact that there is no large supply of ore sufficiently high in phosphorus. If we could increase the phosphorus in the Birmingham ores about one-half of one per cent., we could make far cheaper steel than we can by the present open hearth process.

Q. Because you could then use the basic Bessemer process in which phosphorus is an advantage?

A. Yes, sir. In the basic Bessemer process the phosphorus pays for the cost of the conversion, so that your ingots cost you about as much as your pig iron.

Q. How does that phenomenon take place? Does the phosphorus produce a useful by-product?

A. When pig iron carries as much as two per cent. phosphorus, it will, if the slag amounts to 25 per cent. of the weight of the steel produced, yield a slag carrying 15 or 16 per cent. phosphoric acid. This slag is readily saleable as a fertilizer, and has become a very important article of commerce. It is imported into the United States in considerable quantity, and is of particular advantage to a steel works using by-product coke ovens.

Q. Then the presence of phosphorus in iron ore is not necessarily an unmixed evil?

A. The presence of phosphorus in iron ore causes expense up to a certain point, but beyond that point it is a distinct advantage.

Q. Let us go back to Newfoundland. I got you off our subject there.

Have you made an estimate of the quantity of merchantable iron ore contained in that Conception Bay deposit, or any part of it?

A. I have made a number of such estimates, Mr. Reed, based on various theories as to ownership and working conditions. The basis for the estimate there may be stated briefly as follows: There are three workable ore beds, all of which are being operated at present. Of these the top bed averages six feet in thickness. The second or Scotia bed averages eight feet in thickness. The lower or Dominion bed averages sixteen feet in thickness. I may note that the terms "Scotia" and "Dominion" do not imply anything as to the present

ownership of the beds, but simply refer to the fact that in the workings of the outcrop the Nova Scotia Company happened to operate one bed and the Dominion Company operated the other.

The total thickness of workable ore in the trough will average 30 feet. This amounts to 90,000,000 tons per square mile of area. The Nova Scotia Company at present owns 55½ square miles of submarine areas. Its total probable tonnage is in the neighborhood of five thousand million tons.

Q. How about the Dominion Company?

A. The Dominion Company has remaining some forty or fifty million tons of ore on the land. It has two groups of submarine areas, which will aggregate possibly five hundred to six hundred million tons.

Q. Just a small deposit! Apart from the question of ownership, have you made any estimate based on what seemed to you to be a reasonable radius from Bell Island?

MR. DICKINSON: I object to that as too vague. The radius is not given.

MR. REED: You did not expect me to state the radius in the question, did you, Judge? That would make it leading.

MR. DICKINSON: I did not expect you to say it, but I object because you did not.

By MR. REED:

Q. Have you made such an estimate, Mr. Eckel?

A. Of a working distance?

Q. Based on any radius from Bell Island.

A. If it is assumed that all the ore will have to be taken out from workings whose slopes originate on Bell Island, the total tonnage available under this limitation will be in the neighborhood of thirty-five hundred million tons.

There is no reason, however, to limit the tonnage in this fashion, because slopes driven down from the shore of Conception Bay will reach tonnages of equivalent size.

Q. Within what radius did you reach this figure of three and a half billions available from Bell Island?

A. I am assuming that the five mile haulage will be en-

tirely within economic limits. That has been common practice in estimates abroad for several decades.

Q. And this tonnage that you have stated, of three and a half billions, is available within a five mile radius of Bell Island?

A. Exactly so.

Q. Within a similar radius from points on the main land at which the ore body outcrops, what aditional tonnage is available?

A. Almost the entire extent of the trough can be operated from points on one of the two shores.

Q. Have you made personal investigation along the shore to determine the points at which the outcrop appears?

A. I have examined both shores of Conception Bay for their entire extent and have made detailed studies of the strike and dip of the rocks along those shores, so that I have very little doubt as to the shape of the ore bearing trough itself or its distance from the shore.

Q. You believe it can be reached from either shore?

A. I believe that some portion of it can be reached from either shore.

Q. That is what I mean.

A. By far the greater tonnage will be secured from the eastern shore of the bay, because the trough approaches that more closely than it does the western shore; but the Nova Scotia Company has secured area in such a fashion as to make it possible to work down from the western shore entirely on their own land.

Q. Tell us a little about the availability of this ore of which there are such large quantities. Did you study mining costs at all?

A. I did.

Q. What can that ore be delivered on shipboard for at Bell Island?

A. The open cut ore can be delivered on shipboard for in the neighborhood of eighty cents per ton. The ore from the underground or submarine mines will cost somewhat more than that. A fair average for the shipments of this year

would probably be in the neighborhood of $1 to $1.20 loaded on board ship at Bell Island.

Q. What does it cost to transport that ore from the dock at Bell Island say to Philadelphia?

A. The actual charters under which the ore is being shipped range from 70 to 80 cents per ton, for shipments from Bell Island to Philadelphia, when no back freight is handled. On the occasions when coal is taken as a back load the rate chargeable against the ore would amount to about 50 cents a ton.

Q. Assuming that no back freight can be got, and these boats have to go back empty on every trip, what does it cost to mine this ore and deliver it at Philadelphia? What is the total cost?

A. The total cost will not in any case exceed $2.25 per ton, and in ordinary shipping seasons will probably not exceed $2.10 per ton. This means that the ore reaches Philadelphia at a net cost not much in excess of 4 cents per unit of iron. It is the cheapest ore supply in the world delivered at eastern Atlantic ports or in German or English ports.

Q. Is there any ore of any district that can be delivered at Philadelphia, Baltimore or New York at such a price, that you know of? Can the Adirondack ores reach that?

A. The Adirondack ores, with barge canal shipments, might come close to that price. At the moment I would hesitate to put a figure in for that. There is a small tonnage which might be gotten out along the Hudson River, tributary to New York harbor points which might meet it, but there is no tonage anywhere in the world of comparable size which can reach any of the big steel markets of the world on a parity with Newfoundland.

Q. To what points in this country have Newfoundland ores been shipped in recent years?

A. They have come in entirely through Philadelphia.

Q. What companies are using them?

A. They are being used at several points in eastern Pennsylvania, to the extent of 150,000 to 250,000 tons yearly.

Mr. Dickinson: Is that the aggregate you are giving?

THE WITNESS: Yes. This ore is sold at Philadelphia at from 7 to 7½ cents per unit.

By MR. REED:

Q. Making a very handsome profit for somebody?

A. It is certainly a fair working profit for the Nova Scotia Steel & Coal Company.

Q. Can Lake Superior ores be delivered at Philadelphia, New York and Baltimore at 4 cents a unit?

A. They certainly cannot. In normal years Lake ores at the extreme eastern point at which they could possibly be shipped to meet eastern or foreign ores would have to get a price of nine cents a unit in order to compete.

Q. What factors, if any, are there which would tend to increase or decrease the relative importance of ores thus available on the Atlantic coast, or increase or decrease the relative importance of those Atlantic ores against the Lake ores?

A. Any shifting of the center of steel production toward the Atlantic coast would of course tend to increase the relative importance of the eastern and foreign ores, and such shifting is, under present commercial and tariff conditions a matter of absolute necessity, if any proportion of the export and coast trade is to be retained by American plants.

MR. REED: You may cross examine.

CROSS EXAMINATION

By MR. DICKINSON:

Q. Mr. Eckel, from your testimony I should judge it to be your opinion that any capitalization of any company based upon a valuation of Mesabi ores at a dollar a ton in the ground would have a rather sorry outlook, would it not?

A. From what portion of my testimony, Judge Dickinson?

Q. Well, from what you have been saying about these Newfoundland ores and their competition.

A. I would hesitate to express an opinion on that point, Judge Dickinson. The Lake Superior ores will always have

a certain portion of the area of the United States within which they will be very important factors. Personally, I do not think that they will be as important factors throughout the whole United States ever again in the future as they have been in the past.

Q. They have been in the past, have they not?

A. They have produced a very large proportion of the American iron ore output.

Q. Well, from 1901 up to 1911, were not the Lake Superior ores the basis of the steel industry of the United States?

A. They were the basis of a portion of it, of course.

Q. Well, a very large portion—more than 50 per cent. of it?

A. I could not answer as to that, Judge Dickinson.

Q. You do not know about that?

A. I do not.

Q. You do know, though, about these Newfoundland ores?

A. What is that?

Q. I say, you do know about the Newfoundland ores and the cost of transporting them, and what is likely to be the development of the steel industry on the Atlantic Coast and the shrinkage of the importance, relatively, at points farther west?

A. Oh, yes.

Q. But you cannot answer that question?

A. I made a special study of the matter which you have just summarized in your statement.

Q. Did you not make a special study of the Lake ores?

A. I never did.

Q. At one time?

A. Never at any time.

Q. Never at any time?

A. No.

Q. Did you ever make any study of them?

A. Not at all. My only interest in Lake ores has been that at a few points they become of interest to merchant miners and merchant furnace men in the East and South. I am interested to know about how far, in ordinary years, they reach into the districts in which I am interested.

Q. You say you have made no study of the Lake Superior ores at any time?

A. None whatever?

Q. None whatever?

A. No.

Q. Do you know the cost of mining ore there, of your own knowledge?

A. Not of my own knowledge.

Q. Or from any investigations made on the ground?

A. None whatever.

Q. Do you know the cost of transporting ore there to any market, from any examination made there or from any original records?

A. No.

Q. Do you know what it costs the United States Steel Corporation to mine ore in the open pit mines in the Mesabi region and put the ore on cars?

A. Not from any personal investigation, Judge Dickinson.

Q. Well, do you know what it is?

A. I have read a report published by the Bureau of Corporations, which I believe is a portion of the record in this case.

Q. Do you know from that what it is?

MR. REED: Let him finish.

MR. DICKINSON: Very well.

THE WITNESS: There is nothing which I could add to that, from my own knowledge, which would increase or decrease its value to any serious extent.

By MR. DICKINSON:

Q. Well, do you know what is given there as the cost?

A. I do not recall it at the moment, Judge Dickinson. It is a part of the record.

Q. Do you know or can you carry in your mind, or have you made any calculations or used any figures from any source as to the cost of transporting ore from the lake region to any point east of there?

A. Never.

Q. Never?

A. No.

Q. Do you know the profit upon the original cost of the ore, adding to that the cost of mining and the cost of transportation from any of the Lake Superior regions to any of the points where the ore is sold?

A. I do not, Judge Dickinson. I have never been interested in any company operating in the Lake Superior district. I mean that I have never had any personal financial interest in any of those operations. I have never done any work for any company connected with the lake district.

Q. And yet I understand you, Mr. Eckel, to express the opinion that ores from Newfoundland can be put upon the seaboard of the United States at a lower price than ores from the Lake Superior region.

A. Well, there is no question about that, of course. That is a matter of common knowledge.

Q. A matter of common knowledge?

A. Yes. It is very obvious that if the lake ores cannot be sold in Philadelphia at 7½ cents a unit to compete with Newfoundland ores, that they cannot be put there at four cents per unit, which is the cost of Newfoundland ores.

Q. Do you know whether the Steel Corporation ever tried to sell any of their output at that price?

A. I do not know anything about the Steel Corporation's trials.

Q. Do you know anything about its ability to sell it at any price?

A. I know still less about its ability.

Q. I mean what its cost is and what it would take to clear the cost.

A. I have tried very hard to explain to you that I know nothing whatever about that subject. I have not testified about it, and I do not intend to express any opinion with regard to it.

Q. But I do understand you, Mr. Eckel, to have testified on this point, and to have given it as your opinion that ores from Newfoundland can be put here on the Atlantic seaboard

at a price that will enable them to compete with United States ores?

A. It seems to me that a reasonable amount of common sense is all that I require to answer the question in that form. The rate from Pittsburgh to the coast on iron ore is, to the best of my knowledge, $1,38, or at least, it has been so at some time in the recent past. Now, if Newfoundland ores can be placed on the coast for approximately $2.00 per ton, the freight rate will only allow 62 cents for the total cost of mining the Mesabi ores, transporting them down the lakes and putting them into Pittsburgh.

Q. Now, you are taking as a basis of that the rate of freight from Pittsburgh to the Atlantic coast, are you?

A. Exactly. Is there any easier way of getting at it?

Q. Do you know whether the rate to Pittsburgh and then from Pittsburgh to the Atlantic coast would be the same as a through rate all the way from the lake regions to the Atlantic coast?

A. Since there is no such through rate in existence, I can hardly answer that question.

Q. You say there is no such through rate in existence?

A. So far as I know, there is no such through rate in existence.

Q. Do you know what the rates are? Are you an expert in rates?

A. General rates over the entire United States?

Q. Yes.

A. If I were, I would take over the work of the Interstate Commerce Commission. The entire Commission has not been able to settle that question yet.

Q. Can you not answer the question whether or not you are an expert on the question of freight rates?

A. I am not an expert on the question of freight rates in general. I do happen to know the rates which are quoted on certain distances over which I have either shipped ore or have had some occasion for making estimates. The rate to tidewater from Pittsburgh and Wheeling is one of those rates.

Q. Have you ever shipped any ore from the Lake Superior region to tidewater?

A. No, of course not.

Q. Do you know what the rate is?

A. I know nothing whatever about it.

Q. You do not know what rate could be gotten or what the railroads could afford to haul it for?

A. I have already explained what the railroads think they can afford to haul for from Pittsburgh to tidewater districts.

Q. And your answer is based upon that and not upon any knowledge of rates from the Lake Superior district to tidewater?

A. I believe I have said before, Judge Dickinson, that so far as I know there are no such rates quoted.

Q. But you do not know what the rate would be?

A. Of course I do not know, Judge Dickinson. There is nobody in the world who knows what a future rate may or may not be.

Q. Do you know that there has been no Lake Superior ore shipped to the Maryland Company?

A. Within recent years?

Q. Well, at any time?

A. I do not know anything of that sort.

Q. Do you know that there has been no Lake Superior ore shipped to Bethlehem?

A. I do not. That question is so very general, Judge, that it will be hard to answer it, because at times there are exceptional shipments of iron ore from districts into trade area which they do not normally enter. The Witherbee-Sherman Company have shipped iron ore to Germany, which is not a normal shipment. But if you asked me whether any iron ore had ever gone from the Adirondack region to Germany I would have to say yes. That I happen to know. I do not recall whether anybody ever shipped iron ore to Bethlehem——

Q. You are of the opinion, I infer, from what you have said—without going into the details of your testimony—that an immense quantity of ore can be mined practicably and brought from Newfoundland to the United States to compete

on the seaboard with any ores mined in the United States, looking to price and character of ore and utility?

A. I think that is a fair summary of the case, Judge Dickinson.

Q. What did you put as the amount of those Newfoundland ores?

A. The amount shipped this year?

Q. No; not the amount shipped this year. That is not it. The amount there that is of available and merchantable ore for mining?

A. I do not think I gave a total estimate. I stated that in one area easily reachable from Bell Island itself there was some 3,500,000,000 tons of total ore. I should say that of that, under any mining conditions which now exist or are likely to be met with, probably 50 per cent. could be mined economically. To mine more than that percentage would involve risk as to cover which I do not think any company would care to accept.

Q. That is more ore than there is in the State of Alabama, is it not—merchantable ore?

A. No; I do not think so.

Q. It is more than you have estimated?

A. 1,750,000,000 tons?

Q. What did you estimate as the amount of merchantable ore in Alabama?

A. We have figured merchantable ore in this district at some 1,300,000,000 or 1,400,000,000 tons.

Q. Then it is more than all the ore you figured in the Birmingham district?

A. Yes; very distinctly; in this portion of the Birmingham district.

Q. You also gave an estimate about Texas ore?

A. Yes, sir.

Q. And I understood you to say that Texas ore could be put in Pittsburgh in competition with the Lake Superior ores. Am I correct in that?

A. I did not say that.

Q. You did not say that?

A. No, sir.

Q. The question was asked you about seaboard, and I understood you to say the figure had been based on Pittsburgh.

A. I said I had been asked to make an estimate as to the cost of the ore at seaboard points, and after I had answered that question I added that the transportation company which was interested in the particular Texas Company had made its original figures on shipments into the Pittsburgh and Wheeling districts, with the idea of using its coke in those districts, to meet competition, not on ore, but on pig iron and steel.

Q. You mean you did not mean to say that the ore could be carried there so as to compete with the Lake Superior ores? You did not say that?

A. No; I said that the Western Maryland Railroad expected to do it.

Q. But you do say that in your judgment it could be carried to the Atlantic seaboard?

A. For $2 to $2.50 per ton.

Q. So as to compete?

A. I did not say that.

Q. You did not say that?

A. No, sir. I will say it now, if you wish me to.

Q. I am not asking you to say anything at all.

A. It is absolutely certain.

Q. I want to find out what you did say, and then ask you about it.

A. The record is rather clear on that subject, Judge Dickinson.

Q. Did you say anything about the Cuban ores?

A. I did not.

Q. The Adirondack ores: You expressed a very favorable opinion, as I understand, about those ores and their capacity to compete, did you not, with Lake Superior ores?

A. I expressed a very favorable opinion about the tonnage and grade of those ores, and I made a very definite statement that they did compete with the Lake ores.

Q. That they did compete?

A. Yes, sir.

Q. What did you give as the available tonnage there in the whole Adirondack region?

A. I did not give any estimate.

Q. Of what you did estimate, what did you give? What was the aggregate?

A. I believe my estimate covered 100,000,000 tons at Benson, in case the mining were caried down to a thousand foot level. It covered 40,000,000 tons assured ore at Lyon Mountain, with an additional 100,000,000 tons or so of possible ore for future development; and it covered, though in far less definite form, a small additional tonnage of 25,000,000 tons or so at Salisbury and Clayburg.

Q. Are you in the employ of the United States Steel Corporation?

A. I am not an employe or official or a stockholder of the United States Steel Corporation.

Q. You are not an employe or official or a stockholder of the United States Steel Corporation?

A. No, sir.

Q. Are you employed by the United States Steel Corporation in any sense or way?

A. I am employed by them at the present moment, purely in connection with this case, Judge Dickinson. Not in any sense am I connected with the operations of the holding company or of any of its subsidiaries.

Q. You say you are employed by them at the present moment. How long have you been employed in the way that you are employed at the present moment?

A. At intervals since some date in 1911, when Mr. Stanley first began operations.

Q. You have been present practically at all of the hearings where proof has been taken in this suit in regard to ore, have you not?

A. No, Judge Dickinson, I have not. I have been present at a number of the hearings.

Q. You have been present at a number of the hearings?

A. Yes. I have been present at a number of the hearings at which the Steel Corporation introduced testimony with re-

gard to ore, but I was present at very few hearings at which the Government introduced testimony with regard to ore.

Q. Have you not been employed by the Steel Corporation, Mr. Eckel, to get up data on this question of ore in this law suit?

A. That is hardly a fair statement of the case.

Q. Then make a fair statement, will you? Just state what you have been employed for, what you have done, and then I shall not have to ask you any questions.

A. The counsel for the Steel Corporation have consulted with me in regard to the ore deposits of the United States so far as I was acquainted with those deposits, and so far as they had any bearing on the present case. The fact that in some instances maps were prepared and data were calculated or secured was a later development of the original work.

Q. I understood you to say that since the Stanley investigation began you have been employed from time to time. Now, how much of that time have you been employed in this matter of looking up ores and helping or giving information in regard to the ores?

A. Probably not over one-tenth of my time.

Q. Not over one-tenth of your time?

A. I should think not. I can make an exact calculation if you wish me to do so.

Q. No; I do not care about that.

Now, when you went to Newfoundland, did you go there at the instance of the United States Steel Corporation, or for them and at their expense?

A. Primarily, Judge Dickinson. As a matter of fact, I spent about half the time of my stay in Newfoundland during August on work which had no conection whatever with the United States Steel Corporation, and at a later date I carried on my studies of the transportation, technical and commercial features of the Newfoundland situation entirely in my own time and at my own expense.

Q. But you say primarily you went there on their account?

A. My first study in the field of the Newfoundland ore deposits was done for the United States Steel Corporation.

Q. Now, Mr. Eckel, how much of your time was used in collaborating with Mr. Ellis in regard to that map, Exhibit 107, and in calculating the estimates that were made with regard to that map?

A. That is a rather complicated question.

Q. You see the question is probably complicated, because if I knew just what the facts were I could come at it more directly, and you being in possession of all the facts, if you can make an answer that will help me out, I probably will not have to ask you so many questions.

A. I will try to help you. The estimate for Area No. 1, as it now appears, was carried out in collaboration with Mr. Ellis in a certain sense only. I had already prepared an estimate on this district, based on a map showing most of the ownerships in the district. This was done entirely without collaboration with Mr. Ellis. Later, in order to secure a clearer and more accurate base map for the calculations and for the presentation of the results, I visited Birmingham and worked in collaboration with Mr. Ellis on Area No. 1. The entire time spent in Birmingham was, I fancy, about two weeks. During that period we worked out these tonnages individually, compared results, and checked over all of the details in connection with it.

Q. When you say you worked out these tonnages individually, what do you mean by that? What tonnages?

A. The tonnages, acreages and other figures summarized under the head of No. 1, in the lower right hand corner of Exhibit 107.

Q. Do you mean to say by that that you took Burchard's Area No. 1, or unit No. 1, as shown on his map, Exhibit 113, and that within that unit you actually calculated the tonnage of ore held either by the Tennessee Coal, Iron & Railroad Company, that held by other operating companies, and that held by non-operators?

A. We took each of the fourteen sections into which Mr. Burchard had divided his area and proceeded on the asumption that the estimate of total tonnage which Mr. Burchard gave for each particular section was correct. This was a necessary assumption if the final result were to be made strictly

comparable with the accepted official statistics of the district. Then, in each of those sections we individually computed the acreage owned or controlled, first by the Tennessee Coal, Iron & Railroad Company; second, by independent furnace or steel interests, and, third, by individuals or others not engaged in the manufacture of iron or steel.

Q. Will you give me the formula you used for these computations?

A. In making those computations of course we measured the acreages from the data shown on the map of the district.

Q. You used no formula then for getting at the tonnage for any particular area?

A. I have not mentioned the question of tonnages.

MR. REED: You stopped him before he got to the question of tonnages.

MR. DICKINSON: I did not mean to stop him. Proceed with your answer.

THE WITNESS: (Continuing) In checking over the tonnages we adopted the data presented and the methods followed by Mr. Burchard, as described in Bulletin No. 400.

By MR. DICKINSON:

Q. Did you use any formula for calculating the tonnages of ore in any territory at all, or did you just take his acreage for a certain territory and then divide the tonnage by acres and then multiply by the number of acres belonging to these respective parties? Did you treat it by acres or did you actually calculate it for these different classes of ownerships?

A. I did exactly as Mr. Burchard had done in carrying out his calculations, which was to assume a uniform thickness within that section. In that case it is obvious that the distribution of the acreage within a section makes no difference whatever in the tonnage.

Q. Then you did not make any calculation, except to apportion the whole tonnage according to acreage, is that not correct, within a unit?

A. I think that would be a correct statement of it. It was an absolute necessity in one or two cases.

Q. Mr. Eckel, in Burchard's unit No. 1, what vein did you estimate on?

A. Irondale.

Q. Irondale?

A. Yes.

Q. In his No. 2, what did you estimate on?

A. Irondale and Big Seam.

Q. In his No. 5, what did you estimate on?

A. Irondale and Big Seam.

Q. In his No. 3, what did you estimate on?

A. Irondale and Big Seam.

Q. In his No. 7, what did you estimate on?

A. Big Seam only.

Q. Which?

A. Big Seam only.

Q. Big Seam only?

A. Yes.

Q. In No. 7?

A. Yes.

Q. Do you understand that his——

A. (Interposing) No; I think that in No. 7 the Irondale is still credited. I will make sure of that point if you wish me to. It is entirely a matter of record, and there is no use asking me questions which are definitely known.

Q. Well, I will be the judge of what questions I will ask you.

A. I beg your pardon.

Q. I will not take your advice on that subject. You have given pretty broad opinions here, but I think on this I will have to be guided by my own judgment.

MR. REED: I think perhaps Mr. Eckel's statement was not intended to give advice, Judge.

By MR. DICKINSON:

Q. Now, in No. 8, what vein did you estimate on?

A. Whatever Mr. Burchard did.

Q. You cannot give it?

A. It was Big Seam alone.

Q. How about No. 9?

A. The same.

Q. No. 10?

A. The same answer all the way down to 14.

Q. The same answer all the way down to 14?

A. Yes.

Q. When you were there working on the geological survey, how long were you there actually on the ground?

A. Do you mean in 1906 alone, or——

Q. (Interposing) About that period, yes.

A. I suppose I was in Birmingham or thereabouts a month.

Q. A month?

A. Possibly more than that.

Q. And does that constitute the whole time you did field work there, one month?

A. In that particular year? Yes.

Q. Well, I mean the work that you did for the preparation of that report, on the ground.

A. I have tried to explain to you, Judge Dickinson, that in the preparation of that report I was in absolute charge of the matter.

Q. Yes.

A. I had an assistant there, just as we had teamsters and cooks.

Q. Yes.

A. Now, that assistant was located in camp or along the mines for, I fancy, about two months of that year. I was down in the district for about a month, and in order to economize in time I did not duplicate all his work. I checked it at a few points and then spent the time on something else which was needed just as badly; so that together, Mr. Burchard and I spent something over three months in the district.

Q. How long were you in charge? That is what I want to get at.

A. Of the work?

Q. Of the work there?

A. Until my resignation.

Q. Well, when was that? I do not remember the time of your resignation.

A. I resigned in the late fall of 1906.

Q. When did you begin that work there?

A. The work in the Birmingham district specifically was commenced in the spring of 1906.

Q. So from the spring of 1906 to the fall of 1906 you were engaged, either directly or indirectly, as you have explained, in that preparatory work for the Department?

A. That was not preparatory work; that was the final work in the Birmingham district.

MR. DICKINSON: Then strike out "preparatory."

THE WITNESS: Mr. Burchard visited the district for a few weeks somewhat later, but the main work was done in 1906, as your question stated.

By MR. DICKINSON:

Q. Now, Mr. Eckel, in that territory there that you embrace in No. 1, and for which you made the calculation, state whether or not that lies between the east side of that heavy red line and the westerly side of the black line, or whether it includes the width of those two lines.

A. Why, the color was supposed to have been put on the outside of the neat line. That is the usual practice of draftsmen. I am not sure what the draftsman has done in this particular case. You understand, Judge Dickinson, the calculations have nothing whatever to do with this map. The map is here purely for the benefit of the Court, so it may understand clearly what areas were figured on, and why we did not extend the figures any further.

Q. Well, that is your idea about it?

A. There have been six or seven copies of this map made, and I fancy that the difference between any two copies, or indeed, between the two copies mounted on this particular sheet, might be almost as great as the width of either of those lines; possibly greater.

Q. I do not know that there is any difference at all. I am just asking you whether the territory with respect to which the computation applies is the territory between the lines, or whether it embraces the lines.

A. I have explained that it is meant to be——

Q. (Interposing) You think it is between the lines?

MR. REED: No, he has not explained that.

THE WITNESS: I have explained that the original map had single lines, and that a draftsman was ordered to put on heavier lines in order that the areas might be seen very distinctly. Now, the usual practice in a drafting office in such a case, where you are dealing with map work, is to put on your color work entirely outside of the area to be distinguished, so that, I assume, without having checked this specific map, that the red line on the northwestern side and the black line on the southeastern side are entirely outside of the area which is really covered by the calculations.

By MR. DICKINSON:

Q. Yes. Now, does that black line correspond to any line that appears upon the Burchard map? Has he any such line showing the territory within which he estimated the acreage that you included in area No. 1?

A. I do not think there is a line drawn on that map. There is a change of convention along a certain zone, which has practically the same effect as a line, but is much more difficult to follow.

Q. That is what I wanted to get at. You do not think there is any line on Burchard's map that corresponds to this black line?

A. I have explained that there is a change in the convention used, which is all that is ordinarily employed when you are making up a process print of any sort.

Q. What do you mean by a change in the convention used?

A. May I speak with reference to this particular map?

Q. Yes. Here it is right here (handing witness pamphlet).

MR. REED: Page 128?

MR. COLTON: Yes, I think that is it.

MR. REED: Yes, that is right.

THE WITNESS: Upon looking at the exhibit, on page 128, I find that there is a broken line, very difficult to follow, particularly in the northern section of the map, which seems to indicate the southeastern boundary of the Burchard area, or No. 1 area as we have described it.

By Mr. Dickinson:

Q. That is to say, there appears to be a line there which bounds on the easterly side the same territory on the Burchard map which corresponds to the territory that you have included in your map No. 107 as area No. 1?

A. There is a line which occupies approximately that position. There is a broken line which occupies approximately that position, but, of course, it would be impossible to make use of that particular fact on a map of larger scale, because the error introduced in photographing it up or in enlarging the scale would be tremendous.

Q. Then in making this map, in showing area No. 1, you did not make it so as to correspond to this, the scaling of his map and the scaling of your map?

A. No, his map had nothing whatever to do with his calculations. That, like our map, was put on record simply to make the calculations clear.

Q. So your line there does not purport, by any kind of scaling, to correspond with any line on his map?

A. There is no necessary reason why it should.

Q. Well, I am just asking you whether it does. I will be the judge of the reason. I just want to know what the fact is.

A. Will you please read the question.

(The question and answer were thereupon read by the stenographer.)

The Witness: Let the answer stand then.

Mr. Dickinson: Read the answer.

(The answer was thereupon again read by the stenographer.)

The Witness: The calculations which we made were based on data given by Mr. Burchard in Bulletin No. 400, and though our map and his map are both representations, or rather cover those calculations, I would hesitate to say that they are exactly the same.

By Mr. Dickinson:

Q. His map does not show any ownerships by colors or otherwise?

A. No.

Q. But yours does, within area No. 1?

A. Yes, mine does not only in area No. 1, but in area No. 2.

Q. How did you get the position of that black line along the east side of area No. 1? That is to say, its distance from the outcrop?

A. We took the distances given by Mr. Burchard on page 132 of Bulletin No. 400.

Q. Do you mean to say you took the distances set out in that table?

A. There are two sets of distances given in that table, in the two columns headed "L" and "D," respectively. The column headed "L" contains, of course, horizontal distances, and they need no correction. The column headed "D" was the distance measured down the slope, and needs a correction, usually trifling, in order to reduce it to a horizontal distance. In making this map—in making these calculations, as well as in making the map, the distances accepted for width throughout the area correspond to these corrected distances.

MR. REED: Is that the end of your answer?

THE WITNESS: Yes.

MR. REED: It is half past twelve, now. Suppose we adjourn until two o'clock.

MR. DICKINSON: Very well.

(Whereupon a recess was taken until 2 o'clock p. m.)

AFTER RECESS.

EDWIN C. ECKEL,

the witness under examination at the taking of recess, resumed the stand for further examination.

CROSS EXAMINATION (Continued)

By MR. DICKINSON:

Q. Mr. Eckel, take what corresponds on this map, in Area No. 1, with unit No. 1 on which Mr. Burchard made his esti-

mate, and tell us how far this black line is from the red line in that unit?

A. I should say on that scale it might be anywhere from 3,000 to 3,300 feet. You cannot read much closer than that; possibly 3,400 feet. As a matter of fact I can tell you just what it is.

Q. I want to know what it is on that map.

A. You cannot read within 300 feet on this scale. This is 4,000 feet to the inch.

Q. On that rule?

A. No; on this map. It is 4,000 feet to the inch; 400 feet is a tenth of an inch. The lines here are more than one-tenth of an inch in thickness, and a draftsman would easily get out that amount anywhere.

Q. So, on that, you cannot read within 300 feet?

A. I should not say so, no.

You see this division here is 1/16 (indicating), and the border lines are more than 1/16. The black border line on the southeast of the area is somewhat over 1/16 of an inch in width, and the red border line is almost 1/8 of an inch in width.

Q. That goes from Morrow's Gap to Bald Eagle. Where is Bald Eagle?

A. Here (indicating on map). It is misspelled "Bold Eagle." It is properly Bald Eagle.

Q. Right opposite Bald Eagle, within that unit, show what it shows there.

A. It seems to give the same distance all the way; very close, I should say; between 3,000 and 3,300 or 3,400 feet.

Q. You could not give it any nearer than that?

A. You could not possibly do it.

Q. You could not possibly do it with any kind of an instrument?

A. Why, you can determine the distance closer than that with a much more finely divided scale; but I should say that the draftsman in drawing that line two or three inches would be likely to make as much variation as that in map work, especially when the map was designed as a diagramatic representation of the facts.

Q. That would apply throughout the length of that black line, would it?

A. Entirely. The shrinkage of the paper alone, Judge Dickinson, would create an apparent shift in distance amounting to 50 or 100 feet on the scale, under some conditions. You see this map has been mounted on cloth. We are dealing with a thing which has been wet and pasted, and dried out again.

Q. Would that alter the relation between the black and red lines and the territory contained between them?

A. Just as the paper stretches or shrinks. The map is substantially accurate. I am not trying to withdraw from that statement; but it is substantially accurate. It is not a thing that you could enlarge to ten times this scale and refigure from. That would be asking too much of a draftsman.

Q. Take between Grace's Gap and Spring Gap, what does this scale show the distance to be; right across, now, from Grace's Gap?

A. The distance there at one point would figure out at 5,500 feet, which might be within 200 feet one way or the other of the distance it was intended to be.

Q. It might be 200 feet too much or 200 feet too little?

A. Exactly. Further than that, I would say this: That wherever these units meet, there has necessarily been a compromise in distance so as to bring two units of different lengths together. That is shown on the Burchard map, that he did not lay off his units as exact parallelograms and carry differing distances right up to the junction points of the two units.

Q. The calculations, however, are based on the map so far as it shows what territories of different owners are contained in these units?

A. Only to one extent. The only difference that a shift of this black line on the southeast side of area No. 1 would make would be in case there was a very rapid change in proportion of ownership toward the outcrop. As a matter of fact, that is not the case. A change of a quarter of an inch in either direction here would not make a difference in the total tonnage or acreage amounting to one half of one per cent., in any one of those three classes into which we divided the tonnage and

acreage. We have checked over a great many possibilities here in the way of extending the territory north or south or east or west, and we have done our level best to make a fair statement of the case.

Q. If you throw that black line a quarter of an inch nearer to the red line all the way down, what difference would that make in the entire area?

A. My opinion is that it would make a difference of one half of one per cent. If you wish me to I will prepare a calculation on that basis and submit it later in the case.

Q. I am not asking you about the future; I am asking what the map shows. You say if you bring those two lines a quarter of an inch nearer together by moving the black line, included in area No. 1, there would not be a difference of more than one-half a per cent?

A. There would not be a difference in the proportional——

Q. (Interposing) I am not asking about proportional at all, now.

A. Of course there would be a difference in the total area, but that has nothing to do with the case.

Q. That may be your idea. I am just asking you about the map, and you are troubling yourself with the case.

MR. REED: Judge Dickinson, Mr. Eckel answered your question exactly as you asked it first; then you changed your question and that precipitates this argument.

THE WITNESS: I had no intention of arguing with you about it, Judge Dickinson. I was trying to make the situation as clear as I could.

By MR. DICKINSON:

Q. What did you mean when you said it would have nothing to do with the case?

A. I meant that a change in the total area on this map is not the subject which the map was prepared to illustrate. The map and the calculations were designed to show the relative acreages and tonnages owned by the Tennessee Coal, Iron & Railroad Company and the other owners. Now any change in the totals which did not involve a change in these relative ownerships has of course no bearing on the purpose for which

the calculations were made, and the map and calculations presented.

Q. You mean to say that if you moved that black line a quarter of an inch nearer to the red line that you could say offhand that it would not make a change in that area that would make a change in the percentages you have given?

A. I have made the statement, and I have offered to prove it. It is a matter of fact which can be proven very definitely. It will, however, take some time.

Q. You have made no calculation of that sort?

A. I have not at present.

Q. And you can look at that map and venture that sort of answer, can you, just by looking at the map?

A. Owing to the manner in which the section lines cross the bordering lines, I am fairly confident that that answer is close to the truth.

Q. Then, so far as comparing with Burchard is concerned, it would not make much difference where you drew that black line?

A. The purpose of the calculations was to make a comparison with Mr. Burchard. The matter we are now discussing has no relation whatever to the Burchard calculation.

Q. But the Burchard calculation was based upon a certain total of acreage, was it not?

A. It was not.

Q. Can you say it was not?

A. It was not; the Burchard calculation was based upon certain specified distances.

Q. Yes, but you undertake by an analysis of his work to lay down a line that would embrace the acreage to which he carried his calculation, do you not?

A. We undertake to re-calculate in detail the sections which he had calculated, following out his methods and using the distances which he had stated in his bulletin. This has been done.

Q. But one thing to determine there was just exactly the area to which his estimate applied, was it not?

A. Only in so far as it had some effect upon the relative proportions of the ownership.

Q. But is not the whole proposition stated by Mr. Ellis and by you that Area No. 1 corresponds with the Burchard area in extent, and that out of that area you picked the property of the Tennessee Coal, Iron & Railroad Company, the property of the operating companies and the property of the non-operating companies, and gave out of this total area their percentage of holdings?

A. That is substantially true. I am merely trying to point out that the calculations made and the map are two independent expressions of the same fact. That is, to a certain extent the calculated results and the results shown graphically on the map are independent. They are related purely in so far as any serious error in the map would have changed seriously the proportion of land owned by the Tennessee Coal, Iron & Railroad Company.

Q. Are they not related so far as the fundamental element of area is concerned?

A. The fundamental basis of the calculations was not area; it was tonnage pure and simple.

Q. The area has nothing to do with it, then?

A. Not with the totals. It had to do with the distribution of those totals, but only indirectly.

Q. But in comparing the distribution with the totals, the area had something to do with the total, had it not?

A. Very indirectly.

Q. Didn't you have to have the total area?

A. Not at all.

Q. You did not?

A. Not in any way. We did not have to figure the total area; that was purely a gratuitous piece of information on our part which we placed on the map.

Q. You did not lay down on the map the total area and the areas of the Tennessee Company, and of the operating companies and of the non-operating companies, to show their relative proportion to the whole?

A. We laid down on the map the exact holdings of the Tennessee Company and of other owners, but the question of the absolute acreage owned either by the Tennessee Com-

pany or other owners had no relation whatever to the calculation.

Q. And the relation of this acreage to the entire acreage within the area had no relation?

A. It was purely a relative effect.

Q. I know, but in order to get the relative effect did you not first have to get the whole, and then get the holdings of the Tennessee Company within the boundaries and then the holdings of the operating companies, and then the holdings of the non-operating companies?

A. Yes, we had, but any change in the total which would have affected all of those items equally would have left the actual result unchanged. The word "acre" does not enter in any way into Mr. Burchard's calculations.

Q. But it enters into yours, does it not?

A. Well, not directly.

Q. How does it enter into it if it does not enter into it directly? Does it enter into it at all?

A. Not necessarily.

Q. Well, either directly or necessarily, does it in any way enter into it, and if so, how?

A. We could have calculated the Burchard tonnages with the same accuracy with which we have done them now without making use of the word "acre." We could have accepted any conventional and convenient unit of measurement to do this, and an error which would have involved all the holdings equally would not have affected the percentages of tonnage owned.

Q. Mr. Eckel, I am not asking you what you could have done; I am trying to ask what you did do. Now, if you did use acreage as any element in the calculation, just state how far you did use it, if at all?

A. After the units had been laid off in accordance with the description given by Mr. Burchard, the areas owned within each unit by the Tennessee Company, the independent furnace interests, and by private individuals, were compared. This is the entire extent to which the question of acreage owned entered into the calculations.

Q. Then within those units you took the acreage of each

company and then on a certain basis calculated the amount of ore within that acreage of each company, and in that way reached the result?

A. Yes, Judge Dickinson, I think that is a fair summary of the method of calculation. The thicknesses assumed——

Q. (Interposing) I have not got down to that yet, unless you want to say something about it. Of course, I am going to let you say all you want. Then it was essential, was it not, to first determine the area within the several units?

A. It was essential to locate the boundaries of the several units. The area had no relation to the matter.

Q. When you locate the boundary, that gives you the area, does it not?

A. Not necessarily, because Mr. Burchard himself might have made an error in the area.

Q. I know, but you located the boundary according to his data, and then after locating that, did use certain boundary lines which included certain acreage, which you took then as a basis for calculation; is that not true?

A. Yes, sir.

Q. Then it is highly important as to where this black line was laid down, is it not?

A. I think it is highly important that the black line should be essentially accurate in its location. I have stated that in my opinion it is accurate to every degree that is required.

Q. Well, if you had pushed it out too far, you would have been dealing with a different area from that comprised within the Burchard unit, would you not?

A. Yes, sir.

Q. If you had drawn it too near to the red line, why you would have been dealing with a different area, would you not?

A. Yes, sir. At an earlier stage in the examination I explained that in this particular region it would make very little difference in the final result, however.

Q. That is your broad estimate. That is not the result of any calculation?

A. I have offered to make the calculation, Judge Dickinson.

Q. Do you mean to say that you made the calculation—if you move that black line any distance, whatever it may be,

nearer to the red line, that you have made the calculation as to what difference that would make in the figures?

A. I said nothing of the kind, Judge Dickinson. In fact, I denied having said such a thing.

Q. I am asking you if you said so.

A. I will repeat that I said nothing of the kind.

Q. Did you not say that if you moved that black line a quarter of an inch nearer to the red line it would not make any material difference?

A. I said, in my opinion, looking on the map as it now lies before me, it is very obvious that a shift of a quarter of an inch of that black line would not make any material difference. The matter is one which is absolutely open to proof. It can be done by anyone with a school boy's education, as the map lies before you now.

Q. But you never made any calculation on that?

A. We had no reason to. The map is accurate enough.

Q. And you can look at that map and say that moving that black line a quarter of an inch nearer the red line throughout its whole extent would not make any difference in these percentages—any appreciable difference?

A. I have already said that in my opinion it will not make any appreciable difference. I do not care to strengthen that statement in the manner which you have suggested, and I certainly will not withdraw it.

Q. Mr. Eckel, in locating that black line for getting the acreage with a certain unit it is supposed to be laid down on the earth, is it not, a certain distance from the red line?

A. Yes.

Q. How did you know how far to locate that from the red line in these several units?

A. We used the Burchard figures, subject to the slight correction practiced—to the slight alteration practiced by Mr. Burchard himself, as shown on the map in Bulletin No. 400, by tapering the adjoining ends of two units of different lengths, so as to make a continuous boundary line.

Q. That would only take place where these units came together, would it not?

A. At or near the boundaries.

Q. Where they came together?

A. Yes.

Q. But, leaving that out of consideration, did you locate this black line the distance from the red line that is given by Burchard in his table for these respective units?

A. No; as I explained before, we located it at the distance from the red line which Burchard's distance would give if reduced to a horizontal measurement.

Q. Yes.

A. The Burchard distances were given on slope measurements, and of course this had to be corrected slightly. As a matter of fact, that correction is not noticeable at any point on this map.

Q. Will you please look at this exhibit which has been put in here, Defendants' Exhibit No. 113, and look at the unit No. 1, column No. 2, where it gives D-3400 (page 132) and state what correction you made for that depth, and how far that black line for that unit varies from 3,400 feet from the red line.

A. The slopes in the Alfretta mine, which is the nearest mine to that boundary, show a dip on the north side of ten degrees, and the correction for the 3,400 foot area is somewhat less than 50 feet. The distance which should be accepted there is, therefore, in the neighborhood of 3,350 feet. If we had accepted the average dip for that district, the correction would have been——

Q. Are you using a memorandum there, Mr. Eckel?

A. I am not using a memorandum as to corrections; I am using a tables of cosines.

Q. If you are using any papers there to enable you to answer——

Mr. Reed: Oh, Judge, don't you know what a table of cosines is?

Mr. Dickinson: I used to know, and I think I can find out now.

The Witness: If you will tell me what the cosine of 16½ degrees is, I will not look at the table. I do not know of anybody in the world who keeps that in mind.

By Mr. Dickinson:

Q. Had you finished your answer?

A. No. I was waiting for permission to go ahead with it.

(By request, the stenographer repeated the unfinished answer of the witness.)

The Witness: If we had accepted the average dip for that district, the correction would have been somewhat greater. In order to give an accurate reply to this question I would have to consult a book containing mathematical tables, and as the entire distance involved on the scale of this map is from 1/100 of an inch at the smallest to 1/50 of an inch at the largest, it hardly seems worth while to check it more closely.

By Mr. Dickinson:

Q. You made that calculation on a dip of ten degrees?

A. No, sir.

Q. On what did you make it?

A. I have told you that the north boundary calculation on the dip shown at the nearest opening should have a horizontal width of 3,350 feet or thereabouts. I have also pointed out that the entire possible variation through the unit would lie between 3,350 feet and 3,300 feet, and that this variation is a fraction which cannot be shown on a map of this scale.

Q. You spoke of the Alfretta mine. Did you mean No. 1 or No. 2?

A. No. 1. That is the mine nearest to the boundary, according to my memory.

Q. What did you say the dip there was?

A. The dip on the north side of the first slope is ten degrees, checked up by myself last year. I believe Mr. Burchard also mentions the fact, but that is purely incidental.

Q. What is the frontage of that Alfretta mine on which the depth is ten degrees?

Mr. Reed: What is the frontage, Judge?

The Witness: You mean the Republic's property up there?

By Mr. Dickinson:

Q. That constitutes a certain part, does it not, of that unit No. 1—the Alfretta mine?

A. The dip in the rocks is not confined to the Alfretta mine of the Republic Company. I simply pointed out that that was the first point along that boundary at which you could get a good, decisive reading on the dip with an ordinary compass.

Q. Did you take that for the whole boundary within the first unit?

A. I have already stated that the correction within this unit, whether the dip was ten degrees or eighteen degrees, was so slight that it could not be shown on this map. Since that correction did not enter in any way into the calculations themselves, the subject did not interest me enough to be kept in mind.

Q. Mr. Eckel, suppose within a certain unit—any unit there—a dip was ten degrees and then the next one was seventeen degrees, and the distance shown by Mr. Burchard was the same, the black line would not be the same distance all the time from the red line? In other words, would not the difference between ten degrees and seventeen degrees make a difference as to where that black line would be located with reference to the red line?

A. Not a difference that you could see on any length that Burchard has used.

Q. Well, what dip would make any difference?

A. When the dips rise above 30 degrees the change in length of distances of 5,000 feet or over would be noticeable, but there is no place in that area where the dip averages above 22 or 23 degrees.

Q. Within area No. 1?

A. The entire area No. 1. In the northern part of the area the dips average 17 degrees, or pretty close to that. In the extreme southern section the average dip for possibly half of the area may possibly rise as high as 22½ degrees or 23 degrees. Now, the correction throughout there on the longest distance given by Burchard does not amount to one tenth of one inch, and that is absolutely closer than any draftsman

whom you employ in an engineering office is going to get his map down to. You must remember there were a number of these maps made.

Q. I am not trying to remember.

A. And there is probably a wider difference than that between any two halves of a map that are mounted on this same sheet.

Q. Do you know what dip Burchard used in calculating each one of his units?

A. We know between what limits he worked; we know the average of those limits, and as I have already pointed out no possible change could make an effect which would be noticeable on this map.

Q. You say you know the limits within which he worked. Did you know that from your knowledge as to what the actual dips are or from anything shown in his book?

A. As a matter of fact my knowledge of these dips is probably larger than Mr. Burchard's, but the data are on file in his bulletin.

Q. In Bulletin No. 400?

A. In Bulletin No. 400.

Q. Could you look at Bulletin No. 400 and point out the dip he used in estimating unit No. 1?

A. I can.

Q. I would like to see that.

A. If you will turn to page 74 of Bulletin No. 400 you will find that the dip in Red Mountain, which I might say means purely the dip at the outcrop, in Burchard's unit No. 1, is given as ranging from 15 to 18 degrees. You will also find, if you care to average that, that the average dip throughout the entire district is only 22½ degrees. As a matter of fact this is an over-estimate, because the dip at the outcrop is somewhat higher than the average dip for the whole distance back. My personal opinion is that a fair dip from one end of area No. 1 to the other would be in the neighborhood of 17 to 18 degrees.

Q. What did you use? Did you use that?

A. I did not. I have already explained that in each unit we used dips which seemed proper to use in that unit.

Q. Did you use the dips shown here on page 74 for Red Mountain?

A. The dips shown on page 74 are extreme ranges from the lowest dip of any mine in the district, and ought to be exact from the lowest dip which Burchard happened to think about at the moment up to the highest dip shown in any point in that unit.

It would of course have been ridiculous to use the higher dips which are locally shown in any one of two mines in making these corrections. There is no point in Red Mountain at which 40 to 45 degree dips persist for more than a few feet, and the average dip through the district is absolutely well established by all of the mine workings, as well as by ample opportunities for getting correct dips on the outcrop.

Q. What do you say in Division A the dips vary from, what degree?

A. I said that they averaged about 22½ degrees.

Q. And what was the extreme and what was the lowest?

A. The extreme that it persists for any distance is probably from 15 to 30 degrees.

Q. I notice on page 116 of this book of Mr. Burchard's it says:

"It has been shown in the local descriptions of Division A that the ore beds in Red Mountain between the outcrop and the greatest depths reached by slopes (about 2,305 feet on the dip, and about 750 feet vertically, or a few feet below sea level) dip at angles varying generally from 15 to 45 degrees, but averaging less than 30 degrees."

What does he apply that to?

A. I think that is a very fair statement. The average which I have pointed out is 22½ degrees.

Q. But the average of 15 to 45 degrees is not 22½. He says here that it averages less than thirty, but you say it is down to about 22½.

A. I have said several times that it is in the neighborhood of 22½ degrees.

Q. Then you do not agree exactly with this statement, "generally varying from 15 to 45 degrees"?

A. It seems to me the two statements are entirely in accord.

Q. "Generally varying from 15 to 45," and your average would be what, between 15 and 45?

A. That has nothing to do with the case.

Q. That has nothing to do with the case?

A. Nothing whatever to do with the arithmetic of the case. You cannot obtain an average by adding the extremes together and dividing by two.

Q. You can take the distances to which they prevail.

A. If you have any acquaintance with the Birmingham district you will realize that 45 degrees is a thing that happens in one or two mines in the district for a few feet. If we had dips such as that all the time we would operate mines very differently.

Q. I understood you to say on your direct examination that it would not make any appreciable difference in the result as to percentages whether you took the thickness of the ore at the outcrop or took the average in estimating these units; is that a correct statement or not?

A. So far as I know I have said nothing whatever about the thickness of the ore.

MR. REED: I have no recollection of any such testimony. Will you point it out, please, where he testified that?

MR. DICKINSON: It will delay me; never mind, if he says he did not say so.

By MR. DICKINSON:

Q. In calculating the percentages of ore in the various units owned by the Tennessee Company, the operating companies and the non-operating companies, you used some basis—some standard of thickness, did you not?

A. We followed the methods described by Mr. Burchard in Bulletin No. 400, and used the data which is presented in several tables on page 132.

Q. He uses in his calculation the average thickness, does he not?

A. He uses in his calculation the average between two sets of thickness figures, one set being derived from actual

measurement at the outcrop, and the second set being the thickness which he assumed existed at a certain point away from the outcrop.

Q. And he took the average between the two and applied it all the way through, did he not?

A. In each unit.

Q. In each unit?

A. Yes.

Q. Now, did you do the same thing?

A. Yes.

Q. The result would have been different, would it not, if instead of taking the average, you had applied the thickness at the outcrop?

A. The result in each case would have been slightly larger, without any question; but since the entire object of our work was to draw a comparison with the official government figures on the district, we had to follow the methods of work which they had adopted.

Q. I understand that, but in getting at the relative amount of ore owned within a certain areal unit, if you had applied the thickness at the outcrop in your calculation, instead of the average as used by him, there would have been a difference in the result, would there not?

A. Just at present I cannot see how that would affect the relative figures.

MR. REED: You mean the result as to tonnage, Judge Dickinson, or the result as to the percentages?

MR. DICKINSON: The result as to tonnage, yes.

By MR. DICKINSON:

Q. Now, Mr. Eckel, where you are trying to get at the total content of a certain area, without any apportionment of percentages as between various holdings, the application of the average thickness instead of the thickness at the outcrop, say, or the thickness at the extreme development, would not make any difference, would it, in getting at the contents of a whole area, without any comparison?

A. Why, of course, in this case the totals based on outcrop figures would be somewhat larger than those based on

the Burchard average figures, even if we were dealing with the total area.

Q. If you took the outcrop figure and applied it, it would be larger, but it would just simply be an estimate based on a certain standard, and there would be no question of comparison of parts, would there?

A. If we have only one figure, we can hardly compare it with anything.

Q. Yes, but when you do come within that area to the limit of separate holdings, if there should be a difference of thickness in those separate holdings, if you apply either the outcrop all over, or if you apply the extreme thinnest development all over, or if you apply the average all over, you get an erroneous result, do you not?

A. You might get three different results, if you tried three different methods of calculation, but in the present case——

Q. (Interposing) Now, I am not asking about the present case. I am just asking you about a theoretical case. Do not bother about this case now, please.

A. I was merely trying to explain what actually was done.

MR. REED: I think the witness should be permitted to finish his answer.

MR. DICKINSON: I am just asking him a theoretical question.

MR. REED: I think he should be permitted to finish his answer.

MR. DICKINSON: All right, if Mr. Eckel wants to answer about this particular case, but I am not asking him about it. Let him go ahead.

MR. REED: Mr. Eckel, will you finish your answer?

THE WITNESS: In the Area No. 1, which is really what we are discussing——

MR. DICKINSON: It is not what I am discussing. It may be what you are discussing.

MR. REED: Please go ahead.

THE WITNESS: In Area No. 1, which is what is under discussion, the differences in thickness between the front and

back line on the Burchard theory are in reality very slight. This is particularly the case with regard to the northern half of the district. In the southern half of the district the holdings might be affected slightly by changes in the method of figuring, but it is my recollection that in three of these southern units Mr. Ellis calculated the figures on both bases, and we decided that the difference between the two methods of calculation was not worth the trouble to which we had to go to secure them. The figures were being used purely for comparative purposes, and it seemed ridiculous to split hairs when we knew that the basal assumption which Mr. Burchard had made was probably wrong.

By Mr. Dickinson:

Q. Mr. Eckel, if you will get your mind off this case and answer my question——

Mr. Dickinson: Please read the question to him.

(The question was read by the stenographer as follows:)

"Q. Yes, but when you do come within that area to the limit of separate holdings, if there should be a difference of thickness in those separate holdings, if you apply either the outcrop all over, or"——

Mr. Dickinson: I said "the thickness at the outcrop."

(The stenographer thereupon continued the reading of the question as follows:)

"or if you apply the extreme thinnest development all over, or if you apply the average all over, you get an erroneous result, do you not?"

Mr. Reed: Is that question to be corrected, or are we to have the record show that it was read in its original way or in its corrected way?

Mr. Dickinson: If you want to make any change, in view of that correction——

The Witness: Read my answer, please.

(The answer was read by the stenographer as follows:)

"A. You might get three different results if you tried three different methods of calculation, but in the present case"——

THE WITNESS: I think I have answered the question, Judge Dickinson.

By MR. DICKINSON:

Q. Mr. Eckel, leaving out of view this case, and just asking you now broadly a theoretical question, if in an area as much as 5,000 feet one way, the front and back lines, and 5,300 feet practically across, you applied throughout 12 feet of thickness in one calculation and then throughout in another calculation seven feet of thickness, and then throughout in still another calculation the average, would not the results be very widely apart?

A. In such a case the results would certainly be different, and they might all be incorrect.

Q. But I mean, would not the results as figured differ very much? Would not the answer differ very much?

A. Yes; the totals would certainly be different.

Q. If you apply the average thickness to holdings where the twelve-foot prevailed, it would very much reduce the result, would it not?

A. You mean that any quantity multiplied by 12 is larger than the same quantity multiplied by——

Q. What I mean is this——

A. I am trying to understand just what you do mean, Judge.

Q. What I mean to say is this: If you have a certain unit with 12 feet at the outcrop and 7 feet at the back line, which are assumed to be correct, and then apply the average of that all over that areal unit, would it not, for relative purposes, give a false result? I mean for relative purposes, for comparing the iron content of the various forties within that holding?

A. Why, you have to compare it with something else, Judge, and it does not matter what you do with your figures, you cannot get a relative thing without something to compare it with.

Q. I mean the proportion of the whole, of course. We have been talking about percentages.

A. You have been talking about the effect of taking a given area——

Q. I will state it in this way: Suppose you take a certain area or areal unit, as you call it, that has 12 feet over certain parts of it, and 7 feet over some other parts, and you take an average in calculating of 9.5 feet for the purpose of getting the relative percentages of ore holdings within that areal unit of various owners, some lying towards the front and some towards the rear, and apply that standard to all; do you not get a false standard of comparison?

A. You might or you might not, according to the way in which the holdings were distributed. That is something you could not answer except you picked out a specific case.

Q. Take this case then: Suppose the larger holdings of one holding should be near the outcrop, and the larger holdings of some other with which the comparison is made should be towards the back line, farthest from the outcrop; if for comparison you applied the average to those, would it not give a false result?

A. Under such circumstances the average would be unfair.

Q. It would be unfair?

A. There is no question about that.

Q. But, as I understand you, in getting at these results you did use the Burchard averages and applied them all the way, the unit to which he applied these various——

A. I have told you, Judge Dickinson, that we did do that; but I have added that, in the really critical portion of the area, that was checked by computation of actual forties, and that the results showed that the difference was so slight that it was not worth while making the correction. It is a very serious problem, if you understand it.

Q. I imagine it is. Now, take from the Hedona mine to Walker's Gap; how many forties within that areal unit did you actually check up and on what basis did you check them, so that you could get the iron content of them?

A. I think, Judge Dickinson, that the checking was done in the southern area where the distances were larger and where there was some chance that the matter might be of some importance. It was not done in that section.

Q. Take that section: You have here, have you not—look at the map, please—just south of Hedona, between there and Lone Pine, some land belonging to the Tennessee Coal, Iron & Railroad Company?

A. There is some land there, yes.

Q. And that lies next to the outcrop, does it not?

A. Yes.

Q. Now, back of that, between that and the red line, it is all pink on this map, belonging to non-operating companies, is it not?

A. Yes, sir.

Q. Did you have any drills or any borings in any of that land which lies back of the Tennessee holdings, between it and the black line?

A. Of course not. There is no question of having drill holes in this work. This was a comparison with Burchard's work.

Q. But I understand you to say that you have verified it by making some actual calculations?

A. I said nothing of the kind, Judge.

Q. You did not?

A. Absolutely not. If you will look at the record you will see that I did not.

MR. REED: His evidence was just the contrary, that he did not verify it, and did not——

By MR. DICKINSON:

Q. I understood him to say that he made some calculations and that the result was about the same, and that this was based upon other data. Did you say nothing of the kind?

A. I said absolutely nothing of the kind, Judge Dickinson.

Q. I beg your pardon.

Coming back to this, now, between the Hedona Mine and Walker's Gap, you applied there the Burchard method, did you?

A. We applied it throughout the entire area, Judge Dickinson.

Q. And in getting at the tonnage of the lands lying between the Tennessee Coal Company and the black line you applied

an average thickness all the way through from the front line to the back line?

A. Why, of course.

Q. Was not the ore thicker there, about the property of the Tennessee Company, than it was on the lands that lay back of it?

A. As a matter of fact it is not, as far as we know.

Q. Does not Mr. Burchards' table there show that that is Unit No. 8 from Hedona to Walker's Gap?

A. It does.

Q. Doesn't it show an extreme depth at the outcrop of ten feet?

A. Your question was as to whether the ore was actually thicker on the Tennessee Company's property than elsewhere. My answer is that it was not. You are talking now about Burchard's figures, which had nothing to do with the preceding question.

Q. I am asking whether Burchard's table does not show that at the outcrop it was given as ten feet?

A. Answering that as an entirely independent question I will say that it shows that.

Q. Doesn't it show that the thinnest part assumed by him was 6.5?

A. It does.

Q. And that the average was 8.25?

A. Yes.

Q. And in getting at the relative amount of ore within that unit owned by the Tennessee Company, and other holders within that unit, you applied throughout that unit an average of 8.25?

A. We did, for the reason that on the whole, as you will see if you will look at the map carefully, the average result throughout the area will not be seriously changed.

Q. Take north of Walker's Gap; do there not lie there next to the outcrop, several quarter sections belonging to the Tennessee Company?

A. The section immediately north of the Gap is not Tennessee property. Farther north than that there are several

sections at the Green Springs mine. Beyond that again are other independent properties on the outcrop.

Q. I am asking you whether or not, within No. 8 and in the vicinity of Walker's Gap, there is not a considerable holding of property owned by the Tennessee Company which lies next to the outcrop, and whether or not back of that holding and running out as far as the black line, there is not a considerable amount of property owned by non-operating people?

A. That is unquestionably true.

Q. But in both of these, in estimating the relative tonnage of ore, you applied the average?

A. We applied the average throughout the entire area, just as Burchard had done. You will find, if you look over the map, that the reverse of the conditions you have described occurs very often, so that on the average the results of the two methods are practically the same.

Q. So you are going on average, then, and not upon actual calculation?

A. We are following the Burchard method just as far as we possibly can. Area No. 1, both in mapping and calculation, is as nearly correct as it is possible to carry out such work.

Q. You took separate units?

A. We took the units described by Burchard.

Q. And you undertook to calculate the percentage of ore holdings in those separate units?

A. We did not. There is nothing on the map to indicate the percentage of ore holdings in the separate units. Within those units we calculated the percentage of acreage, and we then assumed the total tonnage which Burchard stated for that unit, and from that, using the acreage percentage, we calculated the tonnage percentage.

Q. But you applied, did you not, the average thickness for that unit, throughout that unit?

A. The question of thickness did not enter directly there.

Q. The question of thickness of the ore vein did not cut any figure in your calculation?

A. We accepted Burchard's figures as authoritative.

Q. You applied throughout the whole of his units the average which he took for getting at the entire iron ore content

of the unit, for the Tennessee Company, and the same for the holdings of the other owners in that district?

A. Yes, because as I have explained, the final result throughout the entire area is not seriously changed by adopting any other method of calculation, and because the matter of time and money is of some importance to a commercial company.

Q. And you have made no calculation for these various units for the purpose of comparing with Burchard?

A. I have already stated that in three of the units Mr. Ellis calculated that on the basis which you think would be preferable.

Q. I am not saying that anything is preferable; I am try- to find out what was done. It may be all right.

A. I assure you that it is all right.

Q. You say it is all right?

A. Absolutely.

Q. Within each unit you assumed as correct the total reached by Burchard for that unit, which was reached by his applying an average of thickness throughout the whole?

A. Yes.

Q. Then when you came to apportion the percentages within that unit, the various holdings, you applied that same unit without regard to where those respective holdings were situated, whether near the outcrop or remote from it?

A. We did, Judge Dickinson, for the reason I have explained, that on the entire area it made no appreciable difference what method we used, and this is by far the cheapest to do. Calculations of this sort are not very simple or rapid. We had to check them with very great accuracy.

Q. Then you do not think it would make much difference either if within that unit you should apply to the Tennessee holdings approximately the thickest shown by Burchard in that areal unit, and applied to these more remote approximately the thinnest, for the purposes of comparison?

A. It would in that particular unit make a very slight difference, but there are other units in which the difference will be just the other way.

Q. So you have let these things balance each other?

A. Everything in the Burchard calculation was a matter of averages. We cannot pretend to be accurate down to a hair's breadth in a matter of this kind.

Q. But Burchard did not balance one unit against another; he treated them as separate entities, didn't he?

A. The only purpose which Burchard had in mind in separating those units was convenience in calculation.

Q. I understand, but he treated them separately, didn't he?

A. Why of course. Each one had to be calculated separately, but the only matter in which he was interested was the total tonnage of the district, and that is the only matter in which we were interested.

Q. No; you were interested in comparisons; that is the main thing?

A. Yes, in making comparisons up to the practicable limit of accuracy.

Q. But you have allowed for some compensation for errors between these various units?

A. Yes, as we have to allow for compensation in draftsmen's errors, and things of that kind.

Q. But that you cannot calculate, can you?

A. And as I have already explained to you, it would be negligible in any district.

Q. But as a matter of calculation, you cannot give what it is with those units, what the variation would be?

A. It is not a matter of any importance to us.

Q. It may not be to you.

A. We have followed the Burchard process as far as anybody can possibly do so. If you wish the entire area here to be recalculated on a definite plan which you are willing to suggest I think the Steel Corporation would be willing to have it done.

Q. I am not asking any favors of the Steel Corporation or of you about that at all; I am just trying to get at what was done and the way it was done.

Mr. Eckel, you were connected, I believe you have stated, with the Geological Survey of the Department of the

Interior, and do you remember preparing a bulletin for the year 1906 on the subject of iron ores and iron products?

A. No bulletin, Judge Dickinson. There is a report in the volume on Mineral Resources for that year, I believe.

Q. Well, we will not quarrel about the name. I will ask you, Mr. Eckel, if it was not at that time, in 1906, your opinion as an expert, that the lake district was pre-eminently the greatest ore-bearing district in the United States, and that it produced approximately four-fifths of the total, as against one-seventh from the southern district, one-twentieth from the northern district and one-sixtieth from the western district of the United States?

A. If you are reading from that report, Judge Dickinson, I have no doubt that is substantially correct. I do not keep the figures in my mind.

MR. REED: Have you a copy here?

THE WITNESS: No, I have not a copy. Is it in evidence?

MR. REED: No.

By MR. DICKINSON:

Q. As a matter of recollection and general scientific knowledge, I will ask you if that is not correct?

A. I do not recall the statistics for that year, Judge Dickinson. I have not any reason to doubt the statement that you are making.

MR. REED: It is not a statement; it is a question, Mr. Eckel.

THE WITNESS: I have no reason to doubt that the report contained a statement to that effect.

By MR. DICKINSON:

Q. I am asking you now, as a matter of general knowledge among people in your line of business, was not that an accepted fact at that time?

A. Why, you are asking me two separate things, Judge Dickinson, if you will pardon me.

Q. Then just answer one and then answer the other, and in that way you can separate them.

A. The statistics for the year are published in the report which you are now reading. Obviously, it could not have

been a matter of general knowledge until that report was published.

Q. After that report was published, was it a matter of general knowledge?

A. I cannot answer as to that.

Q. Well, what was your best judgment at that time as an expert and mineralogist or geologist, or whatever lines you had been pursuing?

A. I had no opinion at that time on that subject.

Q. You had no opinion?

A. Whatever statement I made in that regard was purely a statement of fact, and is to be understood in connection with the statistics which were submitted. It was not an opinion in any sense.

Q. It was a statement of fact, then?

A. If I have said in that that a certain district produced a certain percentage of the tonnage for a certain year, that was a statement of fact and not an opinion.

Q. You would not have stated it unless you believed it to be true?

A. I told you it was a statement of fact.

Q. It was a statement of fact?

A. Yes.

Q. Then can you recall what the fact is? I will ask you to look at the book and see whether or not that is true.

A. I see that in 1906 the Lake Superior district produced 79.66 per cent. of the total iron production of the United States.

Q. I just want to know if that is a correct statement of fact?

A. So far as the statistics on file at the Survey office are concerned it was. They are generally assumed to be approximately correct.

Q. On the next page the following occurs:

"The Lake Superior district which, for convenience, is here considered to be exactly co-extensive with the States of Minnesota, Michigan and Wisconsin, produced during 1906 over 38,000,000 tons of iron ore, equivalent to about 80 per

cent. of the entire American output. It is at present by far the most important iron district, not only in the United States, but in the world."

Did you make that statement?

A. If the statement occurs in a report which I signed, of course I made the statement.

Q. Well, just look and see. Look at the book and see whether you made it or not, will you not?

MR. REED: I object to that for the reason that the report itself is the best evidence of its contents.

THE WITNESS: I see that you have quoted correctly a paragraph on page 19 of that report.

By MR. DICKINSON:

Q. Well, did you make that statement?

A. Obviously I did.

Q. Yes. Now, on the same page occurs the following:

"Production of Lake Superior districts by ranges. Details concerning the production of the five principal ranges are presented in the following tables. It will be seen that the Mesabi Range in 1906 produced slightly over three-fifths of the entire Lake Superior output, and that its ratio of increase over 1905 was also the greatest. The two Minnesota ranges together produced almost exactly two-thirds of the entire Lake Superior production, an amount over one-half of the entire production of the United States."

Did you make that statement?

MR. REED: That is objected to because the report itself is the best evidence of its contents.

A. I find the statement on the same page of the report which is already in evidence. I prepared the report.

MR. REED: Is that report in evidence, Mr. Colton?

MR. COLTON: I do not think so. There have been a great many statements about what is in evidence and what is not in evidence that are not in accordance with the facts.

MR. REED: Without undertaking to follow up that reflection for the moment—I suppose that is a reflection on me——

MR. COLTON: Not on you; but I think the witness has constantly referred to things in the report as in evidence when they were not in evidence.

MR. REED: I do not remember its being in evidence, do you?

MR. COLTON: No.

MR. REED: The majority is against you, Mr. Eckel.

By MR. DICKINSON:

Q. On page 23 occurs the following:

The Great Northern ore lease. The principal development of the year in the Lake Superior iron region, the leasing of the Great Northern or Hill ore lands to the United States Steel Corporation, was, in its initial stage, financial rather than industrial. It would be difficult to over-estimate the importance of this step in its relation to the future of the Lake Superior iron ore industry, and, in fact, to the American iron trade in general. Its most immediate effects were to appreciably strengthen the Steel Corporation's ore reserves, to remove the possibility of any serious future competition based on Lake Superior ores, and to increase the royalty scale for undeveloped Lake Superior ores. The Steel Corporation is now currently credited with controlling something between two-thirds and three-fourths of the entire Lake Superior iron ore supply. As the Geological Survey reports on the Lake districts contain nothing on which to base tonnage estimates, there is no ready means of checking up this current belief. Whatever the exact percentage may be, it is certain that the recent acquisition removed from the market the largest holding of ore lands known to remain in the district.

Did you make that statement?

MR. REED: That is objected to, first, because the report itself is the best evidence of its contents; second, as not cross-examination; third, as hearsay.

THE WITNESS: That is not a correct statement. It seems to be a summary of current ideas at that time, as far as I can recognize it at the present moment.

By Mr. Dickinson:

Q. Did you say what was said there and in the way in which it is said?

A. I have told you that I wrote the report. That covers substantially the entire matter.

Q. Did you entertain that opinion as there expressed at the time you wrote it?

Mr. Reed: That is objected to because it is stated as hearsay in the report itself.

By Mr. Dickinson:

Q. Now answer the question, please.

A. What opinion do you refer to?

Q. Well, first: That the principal development of the year in the Lake Superior district was the leasing of the Great Northern ore lands to the United States Steel Corporation.

Did you entertain that opinion when you made that statement?

A. I should say that that was the principal occurrence of interest to the public which happened in the Lake Superior district that year.

Q. "Its most immediate effects were to appreciably strengthen the Steel Corporation's ore reserves, to remove the possibility of any serious future competition based on Lake Superior ores, and to increase the royalty scale for undeveloped Lake Superior ores."

Did you express those opinions?

A. I made those statements as being fair summaries of ideas current at the time.

Q. You believed it was true when you said it?

A. Probably I did.

Q. Only probably, Mr. Eckel?

A. Well, it is possible that I believed them at the time.

Q. Are you in the haibt of publishing over your signature official or scientific articles and expressing opinions that you only think are probably true?

A. That was not a scientific opinion. That was a statement upon certain commercial developments which had oc-

curred during the year. It might as well have been signed by one of the clerks who actually prepared some of the tables in the report.

Q. Did any clerk write that?

A. I say that I wrote it.

Q. You wrote it?

A. But it might as well have been prepared by one of the clerks who actually prepared certain of the tables.

Q. That is, if somebody knew the same facts, they might have expressed the same opinion?

A. If somebody else were trying to summarize the things, as I did here, in a few pages, they would probably have made those same statements. It does not involve me in any estimate of Steel Corporation tonnages or reserves or in any specific statement as to the Lake district.

Q. Did you say this: "Whatever the exact percentage may be, it is certain that the recent acquisition removed from the market the largest holding of ore lands known to remain in the district."

Was that a true statement?

A. I made that statement, and at the time I assumed that it was true. I would not have willingly published a false statement.

Q. What do you think about it now? Is it true or not?

A. I have no opinion on it now.

MR. REED: That is objected to——

By MR. DICKINSON:

Q. You have no opinion on it now?

MR. REED: Just one moment, Judge. Out of this chaos I want to get an objection. I object to this first as not cross examination; second as hearsay, it appearing both by the pamphlet and by the witness's statements, that he has no personal knowledge of the Lake Superior reserves whatever.

By MR. DICKINSON:

Q. You say you have no opinion about it now. I believe you said that, did you not?

A. I mean by that that I have not at any time in the past done independent or original work in that district, and that I have no opinion on the subject which can be compared in strength or accuracy to my opinions regarding ore reserves in Birmingham or Newfoundland or elsewhere.

Q. I did not mean to ask you whether you have an opinion now as to the existing conditions there, but what is your opinion now as to whether or not the fact as here stated and when stated was correct?

MR. REED: I object to that as not cross examination; because the witness has not been shown to be competent to express an opinion on the subject of Lake Superior ores, and, with your permission—because you are making him your witness on Lake Superior—I object further that his knowledge on this point is shown by his prior examination to be wholly hearsay.

MR. DICKINSON: I made the mistake of assuming that his knowledge was encyclopedic, I suppose.

MR. REED: I do not think——

MR. DICKINSON: Let him answer the question, now that we have the objection.

(By request of the witness the stenographer repeated the pending question as follows:)

"Q. I did not mean to ask you whether you have an opinion now as to the existing conditions there, but what is your opinion now as to whether or not the fact as here stated and when stated was correct."

THE WITNESS: I have no way of determining that, Judge Dickinson. At the time that I wrote that report I assumed that that was the currently accepted idea upon that subject. At the present moment I cannot say whether that current idea was correct or not. I have no means of making an independent judgment on it.

By MR. DICKINSON:

Q. But your opinion when you wrote it was that it was correct?

A. I suppose I must have thought so or I would not have written it. I always try to be accurate.

Q. Can you tell when that opinion was lost or mislaid or when you ceased to be conscious that you had it?

A. There were several things which naturally brought about a change in the opinion of most people concerning the importance of the Lake district and of some other features in connection with the Lake trade. One of them has been the development of production and trade along the coast and in foreign countries, and the development of ores outside of the Lake district.

Q. What time are you speaking of, as to the development——?

A. I am speaking of things which happened in the last five or six years.

Q. But I am speaking of things that existed in 1906.

MR. REED: I beg your pardon, Judge Dickinson. You are asking when his opinion came to be lost or mislaid.

MR. DICKINSON: The opinion as to his opinion then being correct. That is what I mean.

MR. REED: That is what he is stating now. He is now telling you the things that led him to suspect that his opinion then was incorrect.

MR. DICKINSON: I do not think the witness understood me at all.

MR. REED: Is not that what you are asking him for?

MR. DICKINSON: I am not asking what the condition of things is today at all.

THE WITNESS: You are asking when I changed my opinion on this subject——

MR. DICKINSON: As to what your opinion then was; that is all.

MR. REED: I object to that as calling for an opinion on what his opinion then was on a question of fact. Do you insist on the question, Judge Dickinson?

MR. DICKINSON: No; I do not.

MR. REED: I would like the record to show that it was asked.

By MR. DICKINSON:

Q. Is it not a fact that in 1912 "the Minnesota ore ranges

are producing at present considerably more iron ore than is produced in all the rest of the United States put together?"

MR. REED: Objected to as not cross examination.

THE WITNESS: I would not testify on that point; I have no knowledge of it. The paper you have in your hand will cover that.

By MR. DICKINSON:

Q. You have no approximate knowledge?

A. I have approximate knowledge of many things.

Q. But is that approximately correct?

A. I do not care to testify as to a question of statistics unless I have the statistics in front of me.

Q. I am not asking you for exact figures, but I am asking you whether or not it is not known to you that in 1912 the Minnesota iron ranges were producing considerably more iron ore than was produced in all the rest of the United States together?

A. I believe that is true, but I would not state it on the grounds of my own knowledge.

MR. REED: Then I object to it as hearsay.

By MR. DICKINSON:

Q. Do you know anything about whether the percentage of the Lake Superior district has increased or diminished as compared with the other percentages for the balance of the United States within the last two or three years?

A. I do not know about the last two or three years. I think in the last ten years it has increased slightly.

Q. Slightly, you say?

A. Yes.

Q. Is that as near as you can come?

A. Exactly.

Q. Slightly?

A. Yes.

Q. What would you call slightly? I just want to know how to estimate that.

A. Something less than ten per cent., I should say.

Q. That is to say, so far as you know, the increase during

the last ten years in the Minnesota Iron region is something within ten per cent?

A. No, I did not say that.

MR. REED: He did not say anything of the kind.

By MR. DICKINSON:

Q. What was it?

A. Your question was as to the relative increase of the Lake Superior district as compared with the remainder of the United States, and I said it had increased slightly. My statement was absolutely clear.

Q. What is the difference in character of the ore in Burchard's Units Nos. 1, 2 and 5, 3 and 6, and 4 and 7, in respect of combination of fluxing material with ore as compared with that from 4 on south to and including 12?

A. I should say in the district north of the Hedona mine, which comes at the end of Units 4 and 7, there are two distinct ore beds. Down to that point, the Irondale is practically workable everywhere, and in this district it is very much richer than any other ore we have in the district. The Big Seam gradually becomes more limey from north to south in the district, reaching its maximum value at the Woodward mines between Units 11 and 12. From this point south the Big Seam increases in lime very rapidly, and toward the end of the district decreases in iron content.

Q. What is the holding of the Woodward Company there as compared with the Tennessee Company in 1907?

A. Within Area No. 1, do you mean, or the entire district?

Q. The entire district we are speaking of, No. 2.

A. I have no detailed figures on that here. My recollection is that the Woodward holdings, including the recent purchases, contain about half the tonnage of the Tennessee properties. Now, of this total Woodward tonnage somewhat over half, has been secured since 1907.

Q. My question did not apply since that.

A. I beg your pardon, Judge Dickinson. I was trying to get back to the figures. At the time, we were not interested in determining the Woodward tonnage independently, and the only way I can figure it is from an estimate which I made

of their present holdings. I am figuring back to get what they had in 1907.

Q. That is your process of reaching it, is it?

A. Yes, sir.

Q. Very well. Go ahead.

A. And of the present total tonnage of possibly 200,000,000 tons, somewhat over half, but not much over half, has been taken over since 1907, to the best of my knowledge.

Q. Now, will that enable you to answer as to 1907?

A. I should say that in 1907 the Woodward tonnage must have ranged somewhere between 50,000,000 and possibly 80,000,000 or 90,000,000 tons of ore.

Q. In 1907 of the then known available ore, not based on any developments after that in Shade's Mountain or any drillings that you know of subsequent to that time, but as of that time and from your knowledge at that time, did not the Tennessee Coal, Iron & Railroad Company own more than all the other operators there put together?

Mr. Reed: All the other operators, or all the other owners, Judge?

Mr. Dickinson: No, operators.

The Witness: No, I should say not. It was a fairly close balance, I should think, and I would hesitate to express an opinion on that, without going over it more carefully. The Tennessee Company was the largest operator in the district, of course. Next to that, the Woodward Company has probably always ranked as the largest owner of red ore. The Republic and Sloss Companies probably ranked third and fourth even at that date.

By Mr. Dickinson:

Q. What I am asking you is was it not a matter of general knowledge and a fact that the Tennessee Company at that time had more of the then known available ore in the Birmingham district than all of the other operators put together? Can you answer that?

A. I do not think it was.

Q. You do not think so?

A. The knowledge did not reach me if it was a matter of common knowledge.

Q. You have no figures on that?

A. I never heard the statement made by anybody. We never figured on the Tennessee as a competitor.

Q. How do you now estimate their holdings as of the present time, or how have you estimated their holdings as of the present time, as compared with the holdings of all other operators? Which is the largest?

A. Within Area No. 1, or in the district in general?

Q. Why, in this whole estimate that you have given of No. 2.

A. I have not given you an estimate of No. 2.

Q. Oh, you have not?

A. No.

Q. You were consulted about the preparation of it?

A. Yes, and I have said that I believe it is substantially correct. It is somewhat larger.

Q. Than all the other operators put together?

A. Yes.

Q. Now, in Area No. 1, is it larger than all the others put together?

A. It is.

(Whereupon an adjournment was taken until to-morrow, Wednesday, October 15, 1913, at 10:30 o'clock a. m.)

NINETY-FIFTH DAY.

EMPIRE BUILDING,
71 Broadway, New York City.

Wednesday, October 15, 1913.

Before Special Examiner JOHN ARTHUR BROWN.

Present on behalf of the United States, MR. DICKINSON and MR. COLTON.

Present on behalf of the Defendants, MR. LINDABURY, MR. SEVERANCE, MR. BOLLING and MR. REED; also, on behalf of the Great Northern Iron Ore Interests, MR. CHESTER W. CUTHELL.

STIPULATION.

MR. REED: It is stipulated and agreed between counsel for complainant and counsel for the defendants represented in this case by Lindabury, Depue & Faulks that Dr. C. K. Leith, if recalled, would testify in accordance with the statements made in the following letter:

C. K. Leith
Eliot Blackwelder
Alexander N. Winchell
Lawrence Martin
R. H. Whitbeck
W. J. Mead
Edward Steidtmann

UNIVERSITY OF WISCONSIN

Department of Geology

MADISON

Subject: October 9th, 1913.

Mr. D. A. Reed,
1616 Empire Bldg., 71 Broadway,
New York City.

Dear Sir:—

When on the witness stand October 1st, I testified in substance, that the United States Steel Corporation controlled about 30% of the Michigan iron ore reserves in 1911, as estimated by me for the Michigan Tax Commission, and that this percentage had probably since been lowered, due to discoveries of ore by parties other than the United States Steel Corporation. I was asked to verify these figures and submit a statement to go into the record.

In going over my figures in detail I find that of a total tonnage of 169,581,102 used in our final estimates for 1911, 46,884,500 tons, corresponding to 27.5% of the total, were credited to the United States Steel Corporation.

For 1912 the percentage of ore belonging to the Steel Corporation cannot be accurately stated for the reason that one of the ranges (the Marquette) was not reviewed for that year. For the remainder of the ranges the percentage was slightly lowered.

In 1913 the Michigan State Tax Commission, acting through State Geologist R. C. Allen and his assistants, made new estimates of tonnage and valuation for all of the Michigan ores. Mr. Allen writes me on October 7th, 1913, in response to my request for figures, as follows:

> "The figures below, of the accuracy of which you may be assured, inasmuch as you are well seized of the methods by which they were computed, are taken directly from the appraisal sheets which were submitted to the Michigan State Tax Commission in 1913 and which were used as a basis of taxation.
>
> Total tonnage Michigan iron ore 189,467,621. Of this amount the Steel Corporation owns or controls 43,058,855 tons, which is equivalent to 22.6% of the total."

The percentage of Steel Corporation iron ore has, therefore, dropped from 27.5% of the total Michigan reserve in 1911 to 22.6% in 1913.

The figures show that in the two-year interval between 1911 and 1913 the total Michigan reserve has increased approximately 20,000,000 tons, notwithstanding shipment during this period, whereas the reserve credited to the Steel Corporation had decreased by 3,800,000 tons.

The above figures essentially verify the statements made on the witness stand.

Very truly yours,

CKL:M C. K. LEITH.

MR. DICKINSON: In agreeing to this, counsel for plaintiff except to the said testimony applying to the period after the

filing of the petition in this cause as being irrelevant and also to the statements based upon the letter of R. C. Allen as being hearsay and secondary evidence.

Mr. Reed: It is further stipulated and agreed between the same parties that Dr. Leith if recalled would testify that the estimate of 1,600,000,000 tons for the Mesabi range referred to in the testimony on page 6276 of the printed record includes about 130,000,000 tons of washable ores on the western Mesabi averaging 46 per cent. of iron (dry) of non-Bessemer character; and further that Dr. Leith would testify if recalled that he expected to receive compensation from the United States Steel Corporation for his time and expenses on this trip to New York for the purpose of testifying in this case.

EDWIN C. ECKEL,

the witness under examination at the taking of adjournment, resumed the stand.

CROSS-EXAMINATION (Continued)

By Mr. Dickinson:

Q. Mr. Eckel, speaking within your own knowledge, when was ore shipped from Texas to Philadelphia?

A. Some time this year, Judge Dickinson.

Q. Was any ever shipped before that?

A. Not that I recall.

Q. If there was you do not know it?

A. I am practically certain that there was not; I can go as far as that.

Q. You are practically sure?

A. I am practically certain that previous to this year, or possibly late last year there was no ore shipped from Texas to Philadelphia.

Q. Speaking within your own knowledge, how much ore was shipped from Texas to Philadelphia?

A. My impression is that it was a shipment of I should say not to exceed 25,000 tons, possibly smaller; it was purely a trial shipment.

Q. It was purely a trial shipment?

A. Yes.

Q. What do you mean by trial shipment?

A. A shipment to determine the general utility of the ores in the district to which they were being shipped.

Q. When was that shipment, and was it in one shipment or several shipments?

A. More than one cargo. I do not know whether you would call it one shipment or not.

Q. There was more than one cargo?

A. Yes; there are no 25,000 ton boats on that service.

Q. Do you know where that shipment was?

A. I do not know any more definitely than I just testified to.

Q. What is the basis of your knowledge on that subject?

A. I cannot recall that at the moment.

Q. Were you there when the ore was shipped?

A. Oh, no.

Q. Were you here when the ore was received?

A. I was not.

Q. Then somebody told you about it, did they?

A. Yes, and I saw it in some of the trade papers.

Q. What information you have, that you have testified to on that subject, is based altogether on what somebody told you and what you saw in the trade papers?

A. What I testified this morning, yes.

Q. And what you have stated on your direct examination about ore being shipped from Texas to Philadelphia?

A. Yes.

Q. Now, how long were you in Texas examining ore areas there in regard to which you have testified?

A. Several weeks, I think.

Q. In what part of Texas, were you?

A. The northeastern part of Texas, a group of counties in the northern section of the iron-bearing area.

Q. What counties were you in?

A. Cass, Harrison, Marion, Camp, and I think one other; it may have been Upshur, but I am not sure of that.

Q. Did you yourself make any exploration in the way of putting down drill holes or making openings?

A. It was not at all necessary; there were ample excavations for the purpose in which I was interested at the time.

Q. Am I to understand from that answer that you did or did not?

A. I did not. I believe that it was not necessary, in my opinion.

Q. I am just trying to get the fact. Now, what ownership of properties, I mean to whom did the properties belong that you examined? Did it belong to corporations and more than one corporation?

A. Why, so far as I know, there may have been fifty or a hundred different owners in that district. The bulk of the territory which I saw there was entirely in the hands of individuals. I visited several properties which had been mined for the purpose of supplying ore to one furnace there, but even these properties were, I believe, owned to a large extent and operated by individuals.

Q. What was the name of that furnace?

A. It was a furnace at Jefferson. I do not recall the name of the company.

Q. Was that the only furnace within that territory for which ore was being supplied?

A. There was no ore being supplied there at the moment. The furnace was out of blast. There were four or five furnaces in the Texas district which at that time I considered in sufficiently good condition to be put in blast again, if necessary.

Q. But none of them were in blast?

A. The furnace at Rusk was in blast at that time.

Q. Were any of the others in blast?

A. I do not think they were.

Q. What was the capacity of that furnace at Rusk, a day?

A. I do not recall. They are all small furnaces.

Q. What would you call a small furnace?

A. Anything under 50 tons or less.

Q. So there was one furnace with a capacity of 50 tons a day or less, and that was in blast and the others were out of blast?

A. Yes, sir, but that did not affect the tonnage of ore.

Q. What ore properties were supplying this furnace at Rusk that was in blast?

A. I do not know.

Q. You do not know whether you examined the properties that were supplying this furnace or not?

A. I can say very definitely that I did not examine any properties supplying ore to the Rusk furnace. I have already stated that I examined properties which had supplied ore to the Jefferson furnace.

Q. Were those the only properties that you examined?

A. Not at all.

Q. The properties that supplied ore to the Jefferson furnace, in what county were they located?

A. They were scattered along two railroads leading into Jefferson. So far as I recall now, ore had been mined in Cass, Camp and Marion Counties.

Q. For that furnace?

A. For that furnace, at various dates.

Q. Was any mining being done when you were there? If so, where did you see the operations going on?

A. There was no shipping whatever being done when I was in the Texas district.

Q. When was that?

A. That was in 1904.

Q. Have you been there since?

A. I have not been there since.

Q. On what is your testimony in regard to the Texas district based? Is it on what you learned in 1904 there?

A. In my direct testimony I specified the source of my information in each case, Judge Dickinson.

Q. Have you any objection now to telling me on what you based your direct testimony in regard to the Texas ores; whether or not it was confined to what you saw there in 1904 altogether, or whether it was partly on that and partly on other sources of information, and if so, then state what the other sources of information were?

A. The testimony as to the tonnage of ore which I saw in 1904 was based, of course, upon the results of that examina-

tion. The testimony as to the total extent of brown ore fields in Texas was based, as stated in the direct examination, upon the official reports of the Texas Geological Survey.

Mr. Dickinson: Read that answer, please.

(The answer was thereupon read by the stenographer.)

The Witness: May I correct that?

Mr. Dickinson: Oh, yes.

The Witness: Was based upon the results of that field examination, in the first sentence.

By Mr. Dickinson:

Q. Now, in 1904, when you made that field examination and got the information on which you based that part of your testimony which has thus been described by you, state whether or not this examination was confined to examining openings, or whether it was from drill holes, or both?

A. When you are dealing with an ore body which does not range much above three or four feet in thickness, it is impossible, of course, to put down diamond drill or turn drill holes, and no one would suggest such a procedure in actual practice. The ore is exposed in practically every gully throughout that district, and at that time it was exposed in a large number of trenches and test pits, in addition to a number of somewhat larger openings from which actual shipments had been made at various times to the Jefferson furnace.

Q. Then there had been, in 1904, enough exposure there for a scientist or a mineralogist or a practical man in ores to form an estimate of the character and extent of a large part of the Texas ore field, had there?

A. I think at that time there was enough development to form a fairly close idea of the general extent and importance of that ore field.

Q. But you know of no shipment of your own knowledge from the Texas ore fields, or do you know of any shipment of your own knowledge from the Texas ore fields to points east of the Mississippi River, other than that of which you have previously spoken as being sent to Philadelphia for a trial shipment?

A. Yes, Judge Dickinson. When I examined the books of

the Jefferson furnace and discussed its operations with the president of the company, I found that a shipment had been made to a furnace in Chattanooga.

Q. That shipment was made before——

A. (Interposing) That certainly had been made prior to the date of my visit in 1904, and my impression is it had been made within a very few years before that visit.

Q. So although there had been a shipment made prior to 1904 from that district to Chattanooga, and although this Texas ore was so disclosed that a good estimate at that period could have been gotten of the character and extent of it, you know of no other shipment to a point east of the Mississippi River from Texas, except the one which you have described as a trial shipment to Philadelphia?

A. You understand, Judge Dickinson, that until very recently the Texas ore fields have been in the hands of private land owners, who may have owned anywhere from forty to ten or twelve hundred acres of land. It was entirely impossible for a holding of that size to be handled as an export shipping property. I think that was the principal reason why shipments have not been taken up prior to this date.

Q. Now, after giving your explanation of why there have not been any shipments, will you please answer the question put to you; and that is, whether or not you know of any shipment after 1904 to a point east of the Mississippi River, other than the trial shipment which you have described to Philadelphia?

THE WITNESS: Read the question to which Judge Dickinson refers.

(The question was thereupon read by the stenographer.)

THE WITNESS: I do not, Judge Dickinson.

By MR. DICKINSON:

Q. Now, within the area which you have considered as tributary to the railroads in Cass and adjoining counties, on what do you base your calculation of the workable brown ore within that area?

A. I stated that in my opinion there are about 50 square miles which are underlain by at least three feet of brown ore.

Q. And you have applied that thickness uniformly to that 50 square miles?

A. I have, because the remaining 500 square miles or so of brown ore territory in the district may contain somewhat less than three feet, and I have omitted that completely from my estimate.

Q. How far does that three feet lie below the surface?

A. In a large part of the area it is on the surface?

Q. In the 50 square miles you spoke of?

A. I should say that the average stripping over the district is not more than one or two feet.

Q. You mean now the district of 50 square miles?

A. Yes, in a few places the stripping may run somewhat higher, but the average is not over that.

Q. How much of that 50 square miles did you personally examine; what percentage of it?

A. I was over all of that, and a great deal more.

Q. What do you mean by saying that you were "over" all of it? Do you mean that you went over the entire area of that 50 square miles?

A. Using the words in any sense in which they would be used in conversation or otherwise, I certainly was over the entire area of that 50 square miles.

Q. I want the sense in which you used it; and will you please, now, state how you went over it, what method you used in going over this 50 square miles, and what percentage of this 50 square miles you actually saw?

A. I saw 100 per cent. of at least 50 square miles in Texas, in that particular district. I examined it just as far as was necessary, in my opinion, to determine the ore tonnage in that district. That is entirely a professional question, Judge Dickinson, and my opinion on that matter is entirely conclusive.

Q. It is entirely conclusive?

A. It is. It was accepted as such by the Geological Survey. It would be accepted as such by any one buying or selling in that district.

Q. Do not you professional men sometimes differ about your opinions in regard to iron deposits?

A. We may; but the question as to how much work is nec-

essary on an area is something which has to be left to the judgment of the engineer or geologist who is doing the work.

Q. You say this was accepted as conclusive. Accepted by whom?

A. I have already stated that it was accepted as conclusive by the United States Geological Survey, and would be accepted as conclusive by any one who wished to buy or sell ores in that district.

Q. Do you think that from your calculation of the ore contained in 50 square miles in Cass and adjoining counties tributary to the railroad, anybody who wanted to buy ore in that district would accept that as a sufficient basis for the purchase?

A. I would say that anybody who wanted to buy that 50 square miles would not be misled by that opinion in any way.

Q. That is another thing, as to whether they would be misled. I want to know what you meant when you said it would be accepted as a basis of purchase.

A. I do not say that an examination of an area of that size, in such a fashion, would justify the purchase of a small individual tract within that area. The percentage of error in a calculation of that sort decreases very heavily as the area is enlarged; so that an estimate which might have some probability of error when applied to a tract of 40 acres, becomes commercially accurate enough when applied to a tract of 50 square miles.

Q. On that 50 square miles how many worked openings did you actually examine, and in what counties were they?

A. The worked openings were in the counties which I have mentioned already. There were openings in each of the counties, I believe. I do not recall how many test pits, trenches and workings were examined, and I would hesitate to give an estimate now as to their number; but the ore is a blanket which outcrops everywhere through the district, and it is not necessary to sink a test pit in order to determine its areal extent.

Q. How many of those openings you examined were being worked while you were there?

A. I have already told you none of them were being worked.

Q. None of them were being worked?

A. None of them were being worked for shipment to the furnace.

Q. How long since any that you examined had been worked before you examined them?

A. Some of them were being opened for the purpose of developing property while I was there. The last shipments to the furnace, I believe, had been several years before I visited the district.

Q. Your estimates of the cost of taking out those ores were not based, then, upon any actual cost of the operation then going on?

A. Oh, yes.

Q. I have just asked you what operations were then going on, and I understood you to say none.

A. If you will read the testimony, Judge Dickinson——

MR. REED: Do not answer in that way, please.

MR. DICKINSON: Let him answer. I am willing to give him all the leeway he wants.

THE WITNESS: I have tried to distinguish in my testimony between shipments to an operating furnace and between work which was being done to develop property. I specified that no shipments were under way at that moment to the furnace. On the other hand, work was being done in the way of trenching and test pitting on one of the properties. I saw this work, and I also saw the records of the furnace, which showed that a large portion of the ore which they had secured there had been bought from farmers and other holders of small tracts. It had been bought on a basis of delivery at the furnace, and at prices which indicated that the actual excavation must have been very cheap.

By MR. DICKINSON:

Q. Those particular sales made by farmers and others: Do you know anything about the conditions of those sales?

A. The president of the furnace company told me——

Q. I object to your stating what he told you. I am asking what you know.

A. You asked if I knew anything about the conditions of the sale.

Q. I asked if you knew the conditions of those sales.

A. The furnace derived its supply in the manner in which I have described. I do not see how I can explain the matter much more clearly.

Q. What furnace was that to which these sales which you speak of had been made?

A. This was the furnace we have been talking about all the time.

Q. What is the name of it?

A. The one at Jefferson. There was only one at Jefferson. I do not know its particular name.

Q. What was the name of the manager?

A. I believe it was Atkins or Adkins.

Q. What are his initials?

A. I do not recall that at this time, Judge Dickinson.

Q. Do you know anything about any cost of taking out ore in Texas other than in respect of these sales that were made to the furnace to which you have referred?

A. I know what the ore can be mined for. It was purely a matter of shallow excavation, which any engineer would be competent to estimate on.

Q. Are you a practical operator in respect to taking out ore?

A. I am.

Q. What mining operations did you ever superintend?

A. I have been in charge of the development work that Mr. Moxham and his associates have been carrying on in West Virginia for the last five or six years.

Q. Are you actually in charge there of the operations? What are your relations to that?

A. As geologist on that work I have had entire charge of the prospecting work, and the cost of prospecting, which we carry on on a scale which would be called mining in some districts. I have had the handling of all the details of the work.

Q. All of which work?

A. Both surface and underground mining.

Q. Are you in charge of operations of the mining there, in control of it?

A. I have explained my connection with it.

Q. Are you general manager of it?

A. No.

Q. Have they a general manager?

A. I don't think so.

Q. Have they a president?

A. They have.

Q. How much of a mine is it, how much do they get out a day?

A. I have explained that Mr. Moxham——

MR. REED: Do not keep referring to the record; it will make it very hard for the court to read, to have to turn back to see where you have testified. It really will not hurt to testify to it twice.

THE WITNESS: This work has been carried on over the last five or six years. At various times we have operated a large number of properties in Virginia and West Virginia. Of those properties there was only one which was handled as a mining proposition pure and simple. In the case at Rich Patch the mining operations were carried on separately from the prospecting or development work. In all the other cases the work which we did was simply called prospecting or development, but we handled large quantities of material in the course of this prospecting and from a number of the workings we made actual shipments to Goshen furnace.

Q. Is there any mine there being operated regularly taking out ore, and either using it in a furnace of their own or selling it in the market?

A. In Texas?

Q. No, this thing I am asking about, these people—what are their names?

A. The Rich Patch mine, or course, has been operated pretty steadily.

Q. Is it operated now?

A. At the present moment it is not.

Q. How long since it was operated?

A. It was operated up to about a year ago.

Q. How long constantly before that?

A. Under one ownership or another about twenty years.

Q. How long have you had connection with it?

A. About six years.

Q. Then for five years of your connection that mine has been steadily operated?

A. I think so.

Q. Well, in the last year of its operation how much ore was taken out, long tons?

A. I should say about 60 or 70 thousand tons.

Q. And in the year before that?

A. Probably the same amount.

Q. Now, for those two years what did you have to do with the actual operation of those mines?

A. I had nothing whatever to do with the actual operation of the Rich Patch mine; I never testified to that.

Q. What mines, if any, have you actually operated? I mean for taking out ore and using it at the furnace or selling it in the market, apart from any prospecting?

A. In the course of the prospecting work at several points we made shipments to the furnace. The work done in prospecting is exactly the same as in mining, and the costs are strictly comparable. There is no essential difference between getting out a ton of ore and leaving it on the ground and getting out a ton of ore and shipping it away to a furnace, so far as the cost of extracting the ore is concerned.

Q. You think that the expense of taking out ore for prospecting purposes is comparable with the expense of taking out ore for a regular operating mine, with all the machinery adapted for that purpose?

A. In shallow work it is, especially when the prospecting is on a large scale.

Q. What would you call on a large scale?

A. On some of the work we employed 350 men and worked two steam shovels, and we had 27 miles of standard gauge track and passenger trains.

Q. Where was that?

A. I did not specify; it was in West Virginia.

Q. This ore that you have referred to from that mine that was operated a year ago and back to the previous four or five years, what was the character of the ore and how far down was it below the surface?

A. It is a brown hematite or brown ore. Some of the workings are open cut, some operated by hand labor and others by steam shovel. On the other hand some of the workings are entirely underground at a depth of 300 feet or so below the surface.

Q. Did you see any cost sheets of operation in Texas, and if so, for what properties?

A. The ore mined in Texas is mined by individuals in small quantities, so far as I know, and I certainly never saw any cost sheets if any were kept. When you find that a farmer can go out and mine ore and deliver it at a furnace from ten to twenty-five miles away from his operations and sell it to them around $1.25 or $1.50 a ton, you can see very clearly that the mining cost must be very small. If you saw that the ore simply covers the surface over large tracts, you could understand that the handling of such material of itself would constitute a very small charge per ton.

Q. Do you know any farmer that delivered ore from as much as twenty-five miles at that rate?

A. Shipments have been made to the furnace.

Q. Somebody told you that?

A. The officials of the furnace company.

Q. But that is all you know about that?

A. Of course I saw the points from which the shipments had been made.

Q. Do you mean to say you saw the land of the farmer who sold the ore and carried it 25 miles?

A. Exactly.

Q. How did he carry it?

A. I think in this particular case he carried it on the railroad.

Q. Well, in any other cases did they carry it in any other way?

A. Yes, I think for the shorter distances they actually hauled by team.

Q. By team?

A. Yes. It was obviously a thing which, on that basis, you could not do except as spare-time work. You cannot possibly make a five-mile haulage at a time when teams are actively employed, but those people handle their ore as an incident to the cotton picking season.

Q. You say, then, it was spare-time work when the teams were idle?

A. Yes.

Q. You do not know what they charged for the teams, do you?

A. What they charged themselves?

Q. What they estimated for the use of the teams for that work.

A. They could not have charged any serious amount for the teams for that haulage, even for that distance, Judge Dickinson.

Q. What do you know of your own knowledge about the rates from Port Bolivar to Philadelphia?

A. The rates were stated to me by the Western Maryland Railway officials.

Q. That is all you know about them?

A. That is all I know about them.

Q. Well, in giving the cost of delivering this Texas ore at Philadelphia, how much did you allow for the railroad haul per ton?

A. I assumed that the railroad haul might vary between 75 cents and a dollar a ton.

Q. That is to say, from where the ore would be mined to Port Bolivar?

A. From different portions of the field.

Q. Seventy-five cents to a dollar a ton?

A. Yes.

Q. You say you assumed that?

A. Yes, sir.

Q. You do not know what that would be?

A. It was stated to me by the railroad officials who were handling the work at this end, that the rate which would be

put into effect there was one dollar per ton from a point well into the ore field.

Q. Do you know whether any such rate has been put into effect?

A. I do not.

Q. That was a statement of somebody as to what would be put into effect, was it?

A. I am not sure of that. As I recall it now, it was a statement of a rate which had been put into effect.

Q. How?

A. As I recall it now, it was a statement of a rate which had been put into effect.

Q. From what point? Was it a blanket rate covering this whole territory, to Port Bolivar?

A. No, it was a rate from some Cass County properties to Port Bolivar, the particular properties which these people were thinking of at the moment.

Q. Do you know whether there was any such rate at that time in effect?

A. I do not.

Q. You do not undertake to say so?

A. I am simply taking the word of the railway officials.

Q. That there was a rate actually in effect?

A. I have told you my impression is that it was a rate at that time in effect, but it might easily have been a rate which was intended to be put into effect.

Q. But you can not say positively which it was?

A. I can not say positively which it was.

Q. It may have been one or it may have been the other?

A. Exactly.

Q. Now, how much of that did you allow for the shipping rate from Port Bolivar to Philadelphia?

A. I allowed about the same amount for the shipping rate.

Q. That is from 75——

A. (Interposing) To a dollar.

Q. To a dollar a ton?

A. Yes.

Q. Then that would be from $1.50 to $2.00 a ton for carriage?

A. Yes, sir.

Q. And what did you allow for mining the ore?

A. The ore immediately tributary to the railroad can be handled and put on cars for 25 cents a ton, or thereabouts. The allowance which I made for mining in that district might vary from 25 cents up as high as 75 cents a ton. In the latter case, haulage for some distance to the railroad would be included.

Q. Then, it might be from $1.75 to $2.75?

A. Yes, sir; I should think those would be the outside ranges.

Q. What did you allow for the value of the ore?

A. To whom? To the furnace?

Q. To the people who owned it, who were bringing it here to sell it at Philadelphia. You did not expect them to give it away, did you?

A. I expected them to do some of the operation themselves, if they wanted to make anything out of it.

Q. I understand, but you were assigning some value, were you not, to the ore? You did not expect them merely to be reimbursed in the price here for the cost of mining and carriage, did you?

A. Why, that cost would amply reimburse them for the ore, if they bought the ore at land valuations through there.

Q. Do you mean to say that the cost that you have given for the carriage would reimburse them for the value of the ore, if they paid that much out for getting it here?

A. No, not the cost for the carriage; the cost for the mining is enough to cover that. We were speaking of costs; not of profits on the ore.

Q. So when you were estimating the cost in Texas of mining the ore, you included the value of the ore in the cost?

A. If we took simply the cost to the present owners of that ore, it would probably not be in excess of one-tenth to one-quarter of a cent per ton.

Q. You have not answered my question.

MR. REED: Perhaps he was about to do so, Judge.

THE WITNESS: The inclusion or exclusion of a quantity of this size from an estimate which does not profess to be accurate down to the last cent would not interfere with the result in any way.

By MR. DICKINSON:

Q. But you were giving in these figures the actual cost of mining and transportation, were you not?

A. If you will add one-quarter of a cent to the figures in each case, Judge Dickinson, you will have the actual cost of mining and transportation, plus the actual cost of the ore to the present owners. I do not think that I could get the estimate much closer than that.

Q. Well, the question I am asking you is not whether you could get it closer, but whether the estimate that you gave of cost was exclusive of the value of the ore.

A. The range of that estimate was wide enough to include the value of the ore.

Q. In these sales made by these farmers, do you know at what they estimated the value of the ore?

A. I do not.

Q. You do not know anything about that?

A. Nothing whatever.

Q. You do not know how much of that was the cost to them for mining and transportation, and how much of it was for payment for the value of the ore?

A. No. I could form a judgment as to that, however.

Q. I am asking for the facts, as far as you know them.

A. The farmers do not keep books on matters of that sort.

Q. I guess a farmer is interested in getting something besides his labor when he sells something, is he not?

A. In that district, as elsewhere, Judge Dickinson, a farmer is very glad to keep his teams and labor employed at rates which will not yield any profit in times of the year when he does not need them on his own plantation.

Q. Even if he has to give away what he is hauling?

A. Well they come pretty near doing that sometimes.

Q. These figures, then, that you gave as the price at which this ore was delivered contemplated that condition of affairs?

A. No, sir; they did not contemplate that. I am simply

saying that that might have been the condition in some of them.

Q. It might have been the condition?

A. Of course.

Q. You do not know just how it was—whether it was or whether it was not?

A. It would be pretty hard to tell which farmers were making money and which farmers were not making money.

Q. And you do not undertake to say as to the prices that they got, whether or not they were simply reimbursed for the cost, or whether they include the value of the ore?

A. No, Judge Dickinson.

Q. Recurring to the most important producing group in the east central portion of the area in New York marked on Exhibit 106, within a few miles of Lake Champlain, at and near the point marked Mineville on the map, please state how long the character of those ores and the general extent of them have been known?

A. The mines have been operated there for over 100 years. I suppose that that involves some knowledge of the character and general extent of the ores. The actual developments, of course, are still in progress. Drill work is being carried on every day and the developed tonnages are increasing every day.

Q. Take two years ago; was it generally known that within that group there were a great many million tons of available ore of the character you have ascribed to that group?

A. I think that it was generally known that there were a great many million tons of concentratable ore in the Mineville group as far back as ten or fifteen years ago.

Q. Ten or fifteen years ago?

A. I should think so.

Q. From that group how much ore was mined in the year 1911; do you know?

A. I cannot recall exactly, but somewhere in the neighborhood of 500,000 to 700,000 tons, I should say.

Q. And do you know about how much was mined for the same year in the United States?

A. Somewhere around 40,000,000 tons, I believe. I am not sure of that.

Q. Roughly, what percentage would that be? You are a good calculator, and I am not.

A. That would, if these figures are correct, give the Witherbee-Sherman interests a production of about 1½ per cent. of the total United States production.

Q. Referring to the Lyon Mountain ores, you say that they are being used at the Standish furnace?

A. Yes.

Q. What is the capacity of the Standish furnace?

A. I do not recall exactly, Mr. Dickinson. It is probably about a 300-ton furnace.

Q. Who owns that property?

A. The Standish furnace?

Q. Yes.

A. It is the property of the Delaware & Hudson Railroad Company. I do not know the subsidiary which operates it.

Q. It belongs to the Delaware & Hudson Railroad Company?

A. Yes, sir.

MR. REED: The Delaware & Hudson Canal Company.

THE WITNESS: The Delaware & Hudson Canal Company.

By MR. DICKINSON:

Q. Is it connected with any company that you know of that makes steel?

A. So far as I know, it has no such connection.

Q. This 300 tons—that is its daily output?

A. Yes. That is not a definite statement of the Standish capacity; it is merely my memory of about what that furnace is.

Q. Are you familiar with the business of that furnace sufficiently to state who their customers are, and where they sell their iron?

A. I would not pretend to say that definitely, Judge Dickinson.

Q. Can you state, of your own knowledge, any place where they sell their iron?

A. No; except to this extent: That whatever pig iron the Delaware & Hudson Canal Company uses replaces that amount of eastern Pennsylvania or Pittsburgh pig which they would otherwise have to use; and that any amount of Standish pig iron which is sold in the open market equally must replace tonnage of the same sort.

Q. No matter where it is sold?

A. Practically, because there is no district that the Standish reaches which is very far from the markets of the furnaces which I have named.

Q. Do they sell any iron in New York?

A. I do not think so.

Q. In the State of New York, I mean?

A. Oh; I beg your pardon. I do not know whether they do or not.

Q. Do you know where they do sell any of it?

A. I do not. I have said that I could not testify exactly on that point. I do not even know that the Standish sells a large tonnage in the open market. I fancy that the company is likely to use a fair proportion of its tonnage for its own uses, but even in that case it replaces tonnage which they would otherwise have to buy at some point along their lines.

Q. Where is the Standish furnace situated?

A. It is a few miles away from the Lyon Mountain mines, at a station called Standish.

Q. Up in the Adirondacks?

A. Yes.

Q. How far is that by rail from Pittsburgh?

A. I would not pretend to guess at the rail distance to Pittsburgh from that point.

Q. Is the Pittsburgh iron sold substantially where the Standish iron is sold in the same territory?

A. I have told you, Judge Dickinson, that I do not know definitely as to the Standish territory.

Q. Really you do not know anything particularly as to where they make any sales at all, do you?

A. Except that where they have made sales, they must come into competition with eastern Pennsylvania or Pitts-

burgh iron, because there is no other iron which reaches into the Delaware & Hudson territory.

Q. Is the Pittsburgh iron the only iron that reaches into that territory?

A. I have not said that, Judge Dickinson.

Q. I am asking you?

A. No. Of course not.

Q. How about Ohio?

A. I might add that, in addition to Pittsburgh, the other districts dependent on Lake ore whose pig iron reaches into New York at times are the Buffalo, Tonawanda and probably the northern Ohio districts. That does not substantially alter the question that Standish pig iron has got to be shipped in direct competition, if it is to be sold at all, with pig iron made either in the Pittsburgh and related districts, or made in eastern Pennsylvania and northern New Jersey.

Q. You do not know how far that iron could be carried, on the basis of rates, to meet the Pittsburgh competition, and at what point the rates would be such that one would have a territory as against the other on account of the advantage in rates?

A. No; that would require a detailed examination of the cost of pig iron manufacture at Pittsburgh.

Q. How do you know, as a matter of fact, that the Standish pig iron does compete with Pittsburgh pig iron?

A. If it is used at all anywhere along the line of the Delaware & Hudson Canal Company's railroad, it will have to compete with pig iron made in New Jersey, Pennsylvania, western New York and Ohio. Further than this, I do not think you could get a definite statement.

Q. Is not your idea about that this, that if that iron were not produced there, then other irons would be sold there, and to the extent that this is sold, it takes the place of these irons that would be sold?

A. It certainly in some markets replaces a certain amount of iron which otherwise would be made somewhere else.

Q. But you can not state that it actually does replace any Pittsburgh iron?

A. I could not state the exact furnace, or even the particular city from which each ton of replaced iron would come. This is becoming theoretical.

Q. Without coming down to anything quite as fine and accurate as that, do you state it as a fact that it does actually compete with Pittsburgh iron?

A. I would hesitate to make that statement about any specific market point. At the same time, my general impression is that it does so compete.

Q. That is your general impression?

A. Yes.

Q. When you stated on your direct examination on page 12828 as follows: "The pig iron from Standish of course competes with Pittsburgh pig iron," you were only giving a general impression, as you have explained in your cross examination?

A. I was.

Q. To what points in eastern Pennsylvania do you know, of your own knowledge, that Lyon Mountain ores have been shipped? Just state what they were, when they were shipped, and what your knowledge is on that subject.

A. I do not think I stated that any had been shipped to eastern Pennsylvania.

Q. I do not say that you said it; I am just asking you.

A. I do not know of my own knowledge of any points in eastern Pennsylvania to which Lyon Mountain ores have been shipped recently. At the time of my last visit the ore was, I believe, being entirely used by the Standish furnace.

Q. In your answer you qualify it by saying "recently." I am asking you if you know at all, at any time, of any shipments of Lyon Mountain ore having been made from Lyon Mountain to eastern Pennsylvania points, and if so, give the time and the point.

A. I can not testify on that point, Judge Dickinson.

Q. On your direct examination, at page 12828, you said: "At other times shipments have been made from Lyon Mountain to eastern Pennsylvania points," and now you say you can not testify on that?

A. I can not.

Q. You did testify on your direct examination, did you not?

A. It was a very strong impression, derived from my knowledge of the Lyon Mountain work, that shipments had been made, but I could not specify any particular points to which such shipments went.

Q. But you did not give it as an impression; you gave it as a fact.

A. I am trying to explain just what I based that statement on. The manager of the furnace told me that at present all or practically all of his ore was going to Standish, and that statement related to this year's shipments directly, and, though I can not definitely say that any particular tonnage of Lyon Mountain ore ever went to any particular point in eastern Pennsylvania, I am strongly of the belief that my original statement in the testimony was correct.

Q. Is that all the explanation you choose to give?

A. That is all I can give. I tried to explain the basis of it.

Q. Now, referring to the Benson property, I believe you stated that that was first operated five or six years ago; was that correct?

A. I believe it was; possibly a little longer than that, but I am not sure on that point.

Q. Is that ore available except when concentrated?

A. The crude ore, of course, requires concentration, just as many other magnetites do. It would be impossible to charge crude ore into a furnace in competition with other ore supplied today.

Q. When you spoke of available ores, and referred to the Benson ores, please state whether or not those Benson ores became available on account of recent improvements in magnetic concentration.

A. They have become available because of improvements in magnetic concentration, but I would hesitate to say whether the improvements at any specific date had that result. Magnetic processes have been in use for 30 or 40 years at least, and the practice at Mineville and elsewhere has been improving very steadily since that time. Now, it is hard to say just at what time the product of any given mine became com-

mercially available. All that we really know is that at certain periods people have decided that a certain property could be worked profitably and have determined to make a commercial success of it.

Q. Take five years ago; had this improvement in magnetic concentration been developed to such an extent as to make the Benson ores commercially available?

A. I seems to me that it had. I should say that the Benson property, if its size had been realized and the possibilities of cheap surface operation had been realized, would have been opened a great deal longer ago than that.

Q. Longer ago than when?

A. Longer ago than five years, or whenever it was opened.

Q. State, so far as your knowledge goes, when it was first operated.

A. My memory is that it has been in operation for at least five years. It may go back farther than that.

Q. To what extent were these ores sold in the market five or six years ago?

A. I don't recall that.

Q. To any appreciable extent?

A. There are actual statistics on that subject. There is no use of guessing at it.

It was probably appreciable, so far as individual magnetite mines are concerned. It was certainly not on the scale of Mineville at that date, and is not now.

Q. When was the Benson ore first discovered?

A. I believe the records of the existence of magnetic ore in that district date back to 1840, the first geological survey of New York State.

Q. My question was a little more definite than that, and that is when was this Benson property discovered?

A. If my memory is correct, the discovery must have been prior to 1840.

Q. Prior to 1840?

A. Yes.

Q. Would you call that recent?

A. No.

Q. Well, in your direct testimony, you said: "I believe

Benson was first operated five or six years ago. It is one of the recently discovered properties." I understand you to say, according to the best of your knowledge, it was discovered forty years ago. Which is correct?

A. I should say the original testimony should have read: "It is one of the recently developed properties," rather than "discovered." The existence of ores in that general region has been known for sixty or seventy years. The existence on a particular ownership of a large enough tonnage to make a big mining proposition is a matter which might easily be unknown until a specific exploration was carried out on that particular property.

Q. How long since the improvements in magnetic concentration advanced to such a point as to make the Benson properties available?

A. The improvements in magnetic concentration have been very gradual and very steady. Without a very detailed and expensive examination of conditions elsewhere in the world, as well as at Benson, it would be impossible to answer your question correctly and definitely.

Q. When you said, in your direct examination, on page 12829, referring to the Benson properties, "It is one of the recently discovered properties which are only available now because of the improvements in magnetic concentration," will you please explain what you meant in that answer when you said "only available now"?

A. Mineville and Arnold have been worked for over 100 years. Benson and a number of other properties have been worked for ten years or less. It is entirely proper to say that within 100 years the development of magnetic concentration has rendered Benson available. I would go further than that and say that the economic developments in this country of magnetic concentration have chiefly taken place within the last twenty or twenty-five years, but I could not say at just what date it would have been possible to have mined Benson, if anybody had attempted to do it.

Q. What I want to know is, in that answer what did you mean by the expression "only available now"?

A. I was differentiating between Benson, which has been

worked only within the past ten years or so, and the older Champlain mines, which have been worked for over 100 years. The mines on Lake Champlain had so much lump ore——

MR. DICKINSON: Read that answer.

(The answer was thereupon read by the stenographer as follows:)

"A. I was differentiating between Benson, which has been worked only within the past ten years or so——"

MR. DICKINSON: That is enough.

By MR. DICKINSON:

Q. Now, when you say Benson has been worked only within the past ten years or so, what do you mean by that? Do you mean that it has been worked as much as ten years?

A. It might have been. I do not recall the exact date of the beginning of operations there.

Q. So far as you know, it may have been worked ten years?

A. It is possible. My memory is that it was actually shipping five or six years ago, but I would hesitate to say that work had not begun there ten years ago.

Q. Then when you stated, "I believe Benson was first operated five or six years ago," you did not know that as a fact?

A. I do not think the two statements conflict, Judge Dickinson. I have said that my memory as to shipments only goes back five or six years.

Q. When were you first at Benson?

A. This last year.

Q. How?

A. This last year.

Q. This last year?

A. Yes.

Q. Were you there five or six years ago at all?

A. I was not.

Q. You do not know anything of your own knowledge, then, about shipments from there five or six years ago?

A. No. My testimony on that point is dependent on this fact: that when I was on the New York State Survey in 1900 and thereabouts, Benson was not a shipping mine. It has

developed since that date, and my memory is that the beginning of operations of any kind at Benson were subsequent to 1900. I cannot answer as to the particular year in which somebody else started to operate a property.

Q. Well, how much ore was shipped from Benson last year?

A. I do not recall, Judge Dickinson.

Q. Can you approximate it?

A. I could not say.

Q. Is it a large amount or a small amount, as compared with——

A. (Interposing) It is smaller than Mineville.

Q. It is smaller than Mineville?

A. Yes.

Q. How much did Mineville ship?

A. I should say somewhere between 500,000 and 700,000 tons.

Q. How much smaller is Benson than Mineville, speaking broadly?

Mr. Reed: You mean in shipments, of course?

Mr. Dickinson: Yes.

The Witness: Why, it is an open cut mine, Judge Dickinson. The whole question is how much you want to ship out.

By Mr. Dickinson:

Q. No, the whole question is how much did they ship out?

A. Oh, I beg your pardon. I should say that Benson, on a wide range, might have shipped somewhere between 50,000 and 150,000 tons of ore.

Q. Mr. Eckel, take all the ore lands concerning which you have testified as containing ore in this country and Newfoundland, and state whether or not all of these ore lands, excluding those in Alabama and the Lake Superior district, produced in 1912 in tons as much as five per cent. of the tonnage produced in the United States, or as much as seven per cent. of the tonnage produced in the Lake Superior district?

Mr. Reed: Will you read the question, please?

(The question was thereupon read by the stenographer.)

MR. REED: You want that answer from his memory, Judge, or accurately, based on these figures in the 1912 report?

MR. DICKINSON: I want him to answer it in his own way.

THE WITNESS: Will you allow me to use field notes made at the time on that subject?

MR. REED: Certainly.

THE WITNESS: Memoranda which I have prepared covering some of those points.

By MR. DICKINSON:

Q. What field notes are you talking about?

A. I was about to use statistics for the Newfoundland ores, which are official, but are not published in any United States publication.

Q. They are, in substance, I suppose, the same as you have already testified to? I mean to say by that, that the figures there are the basis of the testimony which you have given, so that there would be no difference as far as that is concerned.

A. In part they are. The ones which I was about to use are exact copies given me by the Collector of the Port of St. Johns, Newfoundland. They are entirely official.

Q. In answering this question you may use any information you want, and then I can ask you as to the sources of it.

A. The iron ore produced in Newfoundland during 1912, plus the magnetite ore produced in the Adirondacks, amounted to almost exactly five per cent. of the total iron ore production of the United States. I am specifying it in this manner because I do not recollect whether my testimony touched upon other New York districts or other southern districts, exclusive of the Birmingham.

Q. You referred to Texas and Virginia.

A. If you will specify, in another question, what other districts you would like me to include in the answer, I shall be glad to do it.

Q. I will ask you another question: What percentage of that do you assign to the Newfoundland production?

A. Of the five per cent.?

Q. Yes.

A. Approximately three per cent. is Newfoundland.

Q. What percentage of that comes to the United States?

A. About one-fifth, on the average. The shipments vary somewhat from year to year.

Q. And of this three per cent. assigned to Newfoundland, how much is it in figures?

A. I think that the receipts at United States ports——

Q. I mean the whole of the three per cent., now. Did you not say you assigned three per cent. of your total to Newfoundland?

A. The iron ore production of Newfoundland in 1912 was 1,286,605 tons. Those are the figures filed with the Department of Mines in Newfoundland, and those include shipments to Canada.

Q. That is the entire production?

A. That is the entire production.

Q. That you have taken as the basis?

A. Yes.

Q. What did you take for the New York production?

A. I did not take the total New York production. I took the Adirondack production, given on page 11 of the statistical report on iron ore production for 1912, published by the United States Geological Survey.

Q. What tonnage did you assign to that?

A. 965,736 tons.

Q. Does that cover all that you took? That is to say, Newfoundland and that part of the United States?

A. Yes, sir; Newfoundland and the Adirondack district alone amount to 2,252,341 tons, which, I believe, is slightly more than five per cent. of the total United States production for that year as given in Mineral Resources for 1912.

Q. Take your figures there as to Newfoundland ore that came to this country, and then add that to the other United States ores you have there, and say what percentage that is of the total production. Do you understand me?

MR. REED: I object to this as not cross examination.

THE WITNESS: Without making an accurate calculation, the average Adirondack production, plus the average Newfoundland shipments——

By Mr. Dickinson:

Q. To this country?

A. To this country—would amount to about 2¾ per cent., I should say, of the total United States production.

Q. In speaking of bringing ore from Newfoundland to this country, you used the expression "in ordinary shipping seasons." What did you mean by that? I want to get a definition of that.

Mr. Reed: Where does that occur, Judge?

Mr. Dickinson: Page 12865 of the typewritten record.

The Witness: Will you tell me what connection that was used in?

Mr. Reed: Here is your testimony (handing a copy of the typewritten record to the witness).

The Witness: I meant that the variation in freight cost, which I had, I believe, already spoken of, depended to a large extent on what sort of back cargoes you could get. Heretofore the Scotia Company has taken back coal at intervals, and that reduces the cost of transportation chargeable against the iron ore below the 75 per cent. average which it would have to bear if there were no back freights. The shipments into Newfoundland are increasing gradually. The Colony is taking a certain percentage of bulk products, like cement and steel products, and it is very hard to say whether you could not increase your amount of back freight considerably over that. In speaking of an ordinary shipping season, I was trying to get some average statement for the thing.

The $2.25, the higher estimate which I made, would include the highest estimates of working costs plus freight, without any correction or deduction for back freight. The lower estimate would include a fair reduction for such back freights, as has been shown by experience in the last four or five years of the Scotia company.

Q. Have you fully explained, so far as you can, what you meant by using the term "ordinary shipping seasons"?

A. I think I have.

Q. I want to know if you are through?

A. Yes.

Q. Did you ever ship any ore from Newfoundland to the United States?

A. No.

Q. When, of your own knowledge, do you know of the shipment of ore and to whom it was consigned in this country?

A. The testimony as to the rate which the Scotia Company has paid in the past is based upon statements made to me by the administrative and operating officials of that company. They are checked up in two distinct ways. I have statements made by operating officials of other companies as to shipments made from Nova Scotia and Newfoundland and New Brunswick points which practically substantiate the Scotia figures. Later, in discussing the question of bulk shipments from Newfoundland to the United States, I went over the entire question of charters with one of the largest shipping firms in St. Johns, and found that the Scotia rates were somewhat larger than we could probably secure if a reasonable proportion of back freight were to be provided.

(At the request of Judge Dickinson the pending question was repeated by the stenographer, as follows:)

"Q. When, of your own knowledge, do you know of the shipment of ore and to whom it was consigned in this country"?

Mr. Dickinson: Will you please answer that question as well as you can.

The Witness: Of course I have not seen the actual details of Scotia shipments to this country. It was a matter of private business, and as the Scotia company was a Canadian company it would be difficult to secure the information in any simple way. I have no reason to doubt the statements, however.

By Mr. Dickinson:

Q. I have not asked you a word about any statements. If you can get your mind off this case now and on to my questions and just forget for a moment what answers you have made to other questions, and answer this, it will shorten the proceedings a little.

Mr. Dickinson: Read him the question again, please.

(The pending question was again repeated by the stenographer, as follows:)

"Q. When, of your own knowledge, do you know of the shipment of ore and to whom it was consigned in this country"?

THE WITNESS: I do not know the name of the consignees of any shipment into this country.

By MR. DICKINSON:

Q. Do you know the date of any shipment?

A. I know from official records the tonnage shipped into this country and the tonnage received here during the past five or six years.

Q. Well, those are just the official records of the government there showing the output of the mines and the shipments out of Newfoundland, are they not?

A. There are two sources of records there and one here. In the United States the United States government maintains a customs service which records tonnages imported into the country. These figures are published and we have those available. In Newfoundland there are two sets of figures available. One of mine production as reported to the department of mines, such report being a matter of law, and which is given for calendar years. The other official statistics in Newfoundland are those obtainable from the customs service, which are quoted in fiscal years, such as ours used to be.

Q. And none of these show anything about the cost of shipment?

A. No; none of these show anything about the cost of shipment.

Q. And your answer as to the cost of shipment to this country has not been based upon any information from those sources?

A. No, my answer was not based on that.

Q. And all that you have testified to on that was from conversations with other people or the information gotten in that way?

A. From statements made to me by the officials of the companies concerned in the matter, and from estimates furnished me by the shipping firm which was willing to take the contract.

Q. Take what kind of contract?

A. Contract to handle bulk freight from the coast of Newfoundland, some forty or fifty miles farther away from Philadelphia than Bell Island.

Q. Was there anybody that you know of proposing then to make a contract of shipment? If so, who was it.

A. Exactly. The question at issue was one in which I was called in professionally. I do not feel at liberty to give the name of the party who was proposing to make the shipment, but that was a mineral product, not iron ore, but of substantially the same degree of difficulty in loading, which was to be taken from a point some forty or fifty miles away from Bell Island and brought to Philadelphia.

Q. My questions are confined to iron ore, and I want to know whether or not whatever information you have given in regard to prospective costs or probable costs of bringing iron ore from there to here is not based upon mere conversation.

A. It was on a very distinct statement from the general manager of the Scotia Company as to what their actual contracts were.

Q. As to what their actual contracts then were?

A. Had been. They work on long time contracts. It is perfectly true that if you went in to get a single cargo in the middle of a high priced shipping season you might pay a good deal more than 75 cents a ton for that charter, but they keep big steamers on the service.

Q. Were they uniform prices, or did they vary?

A. I think the price he quoted at 75 cents was an average, and that the extremes he quoted to me were 70 to 80 cents.

Q. How many contracts did he say he had?

A. Judge Dickinson, I did not ask him all of those questions. It was a matter of private business, and it was purely a courtesy on the part of a gentlemen engaged in operations in a country which is without the United States and which is not subject to our jurisdiction in any way. I could not force him to answer, and I thought he was very kind to supply the information which he did.

Q. Did he say how long these rates had been prevailing, or whether they were constant rates, open published rates?

A. There is nothing of open published rates about ocean shipments. You do not ordinarily find them treated like railroad rates. He told me that during the time they had been shipping to the United States, and referring particularly to the last five or six years of that work, their charters had ranged between those prices and that they did not include the profit which they made by hauling back hard coal from Philadelphia whenever they could handle the material. My own idea is that the average cost is probably about 55 cents.

Q. Well, I am not calling for your ideas; I am just calling for what you know, or think you know. We are not calling for any ideas or theories. To what points in the United States, that you know of, have Newfoundland ores been shipped in recent years?

A. Philadelphia only. I do not think there have been shipments to any other point. They are distributed through sales agents there to different points in the district tributary to Philadelphia. I cannot give you the names of the furnaces that use it.

Q. Who is the sales agent there?

A. I believe the sales agent is Pilling & Crane.

Q. Who?

A. Pilling & Crane.

Q. What knowledge have you as to the prices at which Newfoundland ore is sold in Philadelphia?

A. The prices of foreign ores are quoted in the Philadelphia papers, and in trade papers, just about as regularly as the prices of stocks are quoted in New York, because it is the largest ore importing point in the United States.

Q. Are the Newfoundland ores quoted there?

A. The Newfoundland ores, on the occasions I have seen them quoted, have ranged from 7 to 7½ cents per unit.

Q. And it is upon those quotations that you have based your statement as to the prices at which those ores were sold in Philadelphia?

A. Yes; that is, checked up, of course, by some knowledge of the actual profits which the Nova Scotia Company has shown in its transactions.

Q. The ores on which you based analyses for Newfoundland, please state where you obtained them?

A. The ores which Mr. Ellis stated he had analyzed, or the ones of which I have spoken? They are two separate things, Judge Dickinson.

Q. Did you speak of analyzing any Newfoundland ores?

A. Mr. Ellis spoke of having actually sampled Newfoundland ores?

Q. But you did not speak of it?

A. No, I gave the general thing.

Q. Did you analyze these Newfoundland ores?

A. I did not, Judge Dickinson. I am not a chemist. I went over the records of the Nova Scotia Company and have had compiled the average analyses for the last four or five years of their shipments to the different points. My own figuring on them gives an average of 52½ per cent. metallic iron, dry basis. The records are entirely official, all from the working records of the company, which were not prepared with any special view to their use in this trial.

Q. In order to retain any portion of the present export trade in iron and steel by American plants, how far east would it require the center of the steel production, from the present center, to be shifted toward the Atlantic coast?

A. That would involve a very difficult calculation, Judge Dickinson. I might say that the points at which you can most economically produce and sell steel appear to be along the Atlantic coast between New York harbor and Norfolk. Now, if enough capacity were shifted to these points to handle all the export trade and all of the coast trade, it would certainly shift the center of production eastward, but it would be difficult to even estimate the number of miles eastward it would be shifted.

Q. What do you call now the center of steel production?

A. I should say that at present it probably lies somewhere in Ohio—the geographic center.

Q. Do you mean when you say that, taking into consideration the quantity?

A. I am taking into consideration the quantity and distances.

Q. Yes.

A. I have never plotted it myself. I believe it has been done by the Census Bureau.

Q. Do you know the cost laid down in Pittsburgh of Lake Superior ores, including their cost of mining and transportation?

A. No, Judge Dickinson, not except from Government reports, which are not first hand evidence.

Q. You say you cannot give any definite idea as to how far the center of the steel production would have to be shifted, as an absolute necessity, if any proportion of the expert and coast trade is to be retained by American plants?

A. I think, as a mathematical problem, Judge Dickinson, that would be a very serious thing to take up. If you assumed that one-fifth of the present capacity were shifted to the coast, it would probably carry the geographic center of steel production somewhere into Pennsylvania, but I am not sure even of that. I was speaking generally of the situation.

Q. But you think there is an absolute necessity, under present commercial and tariff conditions, that such a shift shall take place in the center of steel production if any proportion of the export trade is to be retained by American plants?

A. I think there is an absolute necessity that the production shall be taken up on the coast, if any serious proportion of the export or Atlantic coast trade is to be retained by American plants.

Q. And if that is not done——

A. (Interposing) The German mills will get in.

Q. When you said "any proportion," what did you mean by "any proportion"? Do you mean it will lose it altogether?

A. I think the loss would be very serious in both cases. I would hesitate to give any percentage figures.

Q. So when you say "any proportion," you do not have any particular percentage in mind?

A. I have in mind rather a large percentage.

Q. Rather a large percentage?

A. Yes.

Q. What percentage did you have in mind when you answered that question in your direct testimony?

MR. REED: Look at your answer.

MR. DICKINSON: Page 12867.

THE WITNESS: I should say over one-half.

By MR. DICKINSON:

Q. Over one-half?

A. Yes.

Q. Well, within what time?

A. Within what time?

Q. Yes, within what time would that catastrophe take place, if the center is not shifted?

A. My present impression is that the catastrophe will take place next spring.

Q. Next spring?

A. Yes.

Q. That is to say, then, your opinion is that unless the center of the steel production is shifted toward the Atlantic Coast by next spring, a very large percentage or proportion of export trade will be lost to American plants?

A. Exactly so.

Q. What experience have you had in foreign commerce?

A. None whatever. I have very definite knowledge of the advantages which the foreign furnaces have in securing their ore supplies and shipping their products.

Q. But you do not know the cost of Lake Superior ores at Pittsburgh?

A. Only so far as they have been stated in government reports, Judge Dickinson.

(Whereupon a recess was taken until two o'clock p. m.)

AFTER RECESS.

EDWIN C. ECKEL,

the witness under examination at the taking of recess, resumed the stand.

MR. DICKINSON: That is all I care to ask this witness, Mr. Reed.

MR. REED: I have no further questions.

GUY E. DIEHL

was called as a witness on behalf of the Defendants, and being first duly sworn, testified as follows:

DIRECT EXAMINATION

By MR. REED:

Q. Mr. Diehl, where do you live?

A. At Duluth, Minnesota.

Q. How long have you lived there?

A. About eight years.

Q. What is your occupation?

A. Mining engineer.

Q. And by what company are you employed?

A. By the Oliver Iron Mining Company.

Q. What title have you and what office do you occupy in that company?

A. I am assistant to Mr. Sebenius, general mining engineer of the Oliver Company.

Q. I show you an exhibit entitled "Iron Ore Properties in the Lake Superior district held by the United States Steel Corporation," Defendants' Exhibit No. 102, and I ask you whether you personally have taken any steps to check up the figures contained on that statement.

A. I have.

Q. Will you describe briefly what steps you took to check that statement?

A. I have compared the ore tonnages shown in the column headed "Reserves as of January 1, 1912," with the tonnages which were reported by the Oliver Company to the Minnesota State Tax Commission and with the corrected tonnages, or tonnages which were changed by the Tax Commission's engineers; so that these tonnage figures on this statement compare and agree with the tonnages in the records of the Minnesota Tax Commission for 1912.

Q. Have you compared them also with the totals which were charged against the Steel Corporation in Mr. Hurd's transcript of the assessments shown by the records of the Minnesota Tax Commission, which is in evidence in this case as Exhibit No. 110?

A. I have.

Q. Mr. Diehl, have you checked these figures, one by one, with those tables?

A. I have.

Q. Have you found any errors in this exhibit which lies before you, in that column?

A. There are no errors. There are some adjustments in here, which would not show on the Tax Commission's records. We have included in here the Steel Corporation's interest in the Union, Mahoning and Biwabik mines.

Q. Those tonnages are charged against the Biwabik Company and the Mahoning Company and the others?

A. Yes.

Q. In the Tax Commission's records?

A. Yes, the operating companies.

Q. That is the same as has been done by Mr. Hurd in the exhibit just mentioned, in his computation of the Steel Corporation's tonnage?

A. It is.

Q. Except for those adjustments which account for the fractional ownership of the Steel Corporation in these mining companies that you have mentioned, do you find any other discrepancy between the exhibit which lies before you and the original records of which you spoke?

A. There is one other adjustment, in reference to properties which the Steel Corporation has retained under the Hill lease. The tonnages entered on this exhibit are those which the Oliver Company expected to mine from the Hill properties after January 1st, 1912, and do not include all of the ore in the properties.

Q. That is the same division of tonnage on these properties as has been made by Mr. Hurd in his notes or his memorandum taken from the records in the tax commission as to

the minimums and accumulated prepaid tonnage on these Hill properties?

A. It is.

Q. Now, taking the next column, Mr. Diehl, the total shipments from 1901 to 1911 inclusive, with what original document have you compared the figures that are shown in that column?

A. I have compared these figures with the statement published by the Iron Trade Review, being shipments from mines.

Q. Have you done that personally?

A. Yes; I have, for each individual mine.

Q. Did you find that these figures checked accurately, or are there discrepancies?

A. There are some minor descrepancies.

Q. I wish you would tell us just how serious those discrepancies are.

A. Well, except for one item on the Marquette range, that is, on the Lake Superior group of mines. The tonnage entered on this statement appears to be the total tonnage shipped from those mines, instead of a three-quarter interest in that tonnage, which is our ownership in that property. That would make a difference of 1,439,000 tons.

Q. If I correctly understand you, then, as to the Lake Superior group of mines on the Marquette range, reserves as of January 1st, 1912, show the Oliver Company's proportionate interest in the tonnage of those mines?

A. Yes.

Q. While in the column headed "Total shipments" the whole shipments of that mine from 1901 to 1911 inclusive have been put in?

A. Yes; that is correct. That applies only to the Hard Ore, section 16, Hematite, and the section 21 mines.

Q. Now, if the figure of total shipments were reduced so as to show only the Steel Corporation's proportion of those shipments, what would the correct figure be?

A. According to the Iron Trade Review statement that would be 4,318,886 tons as against 5,758,348 tons shown on the statement.

Q. The Steel Corporation owns a three-fourths interest in those mines, does it?

A. Yes, it does.

Q. Now, except for that item, do you find the other figures in the shipment column to be substantially correct?

A. I do. Taking the totals on section 1 as the figures which I have obtained from the Iron Trade Review, excluding the error in the shipments from the Lake Superior group, my totals give 171,649,476 tons as against 171,684,150 tons shown on the exhibit.

Q. Now, how is that discrepancy of about 35,000 tons out of about 171,000,000 explained? To what is it due?

A. In my opinion it is due to the fact that the tonnage figures on this exhibit were compiled from the records of the company, which show shipments from mines and which slightly differ from shipments from docks, and shipments from docks are the figures which I believe the Iron Trade Review uses in their statements. The difference would be due to wrecked ore and ore in docks.

MR. DICKINSON: What does that mean?

MR. REED: That is when trains jump the track coming from the mine; it shows in our figures, but not in the Iron Trade Review.

THE WITNESS: The ore is taken from the mine, and we have to account for it, if it is leased ore, to the fee owners.

By MR. REED:

Q. Take the third column in this exhibit, which is headed "Reserves as of April 1, 1901;" how are those figures obtained?

A. That is the addition of the two preceding columns.

Q. Have you checked that addition yourself?

A. I have not checked over the detail addition, but I have checked the totals of the columns in each case.

Q. Which of course verifies the items?

A. Yes.

Q. Did you find the addition correct?

A. I found the addition correct.

Q. Have you checked the summaries shown on the last page of this exhibit?

A. I have.

Q. Are they correct, with the discrepancies that you have mentioned?

A. They are.

Q. Mr. Diehl, you have told us where you got the tonnage of the Minnesota ranges. With what figures did you compare the tonnages in the State of Michigan?

A. I have compared those with Mr. Finlay's report to the Michigan Tax Commission.

Q. Did you find them to be correct?

A. I did.

Q. Of course, we are speaking now only of the figures in the column headed "Reserves as of January 1st, 1912"?

A. Yes, sir.

Q. Those are the figures you mean, are they?

A. Yes, sir; they are.

Q. And on comparing those with Finlay's report you find them to be correct?

A. Yes, I find them to be correct.

Q. Has the Steel Corporation any tonnage in Wisconsin?

A. None that is on the tax records.

Q. Well, I mean excluding the Baraboo range it has not any on those ranges that are taxed by the tax commission?

A. It has the Atlantic mine—the Atlantic and Plummer, but those were taxed not on a tonnage basis, and there is so little tonnage there that it was considered just an exploration, and not taxed on a tonnage basis.

Q. Mr. Diehl, I show you exhibit No. 103, entitled "Statement showing (a) tonnages shipped, &c., (b) Average yearly shipments, &c., (c) Ore reserves, &c., (d) The period of years, &c." and ask you whether you have checked up the figures shown in that exhibit, and if so, in what way?

A. I have checked those figures in the first line, total tonnage shipped years 1907 to 1911, inclusive, with the statements published by the Iron Trade Review, and I have also checked the figures shown in the second line, total United States Steel Corporation tonnage shipped 1907 to 1911, with the statements published by the Iron Trade Review, and with those shipments

as a basis I have carried on the computations which are made on this sheet.

Q. That is, showing the other operators' shipments and the average yearly shipments of the Steel Corporation, and the yearly shipments of other operators?

A. Yes, sir.

Q. Have you verified the subtraction?

A. I have.

Q. And the division into averages?

A. I have, and I have compared the ore reserves of the United States Steel Corporation and the ore reserves of other interests with the tonnages or with the statements which were prepared and which are in evidence as exhibits.

Q. That is, you have compared the statement of ore reserves with Exhibit No. 104, being statement showing tonnages of merchantable iron ore for Lake Superior district by ranges, January 1, 1912?

A. Yes.

Q. Now, did you verify the figures at the bottom of this exhibit which is before you, showing the number of years after January 1, 1912, which the ore reserves of the Steel Corporation and independents are estimated to last?

A. I did.

Q. And the division there is correctly done, is it?

A. Yes, sir; it is.

Q. Now, Mr. Diehl, will you state what errors or discrepancies you have found in this exhibit, if any?

A. For the total tonnage shipped in the years 1907 to 1911, inclusive, from the Mesabi Range, I obtained a total of 124,224,631 tons, as against 124,224,681 tons, shown on the exhibit.

Q. To what is that discrepancy due?

A. I cannot explain it.

Q. It seems to be due to the misreading of a "3" for an "8."

A. Something of that sort.

Q. It is a difference of 50 tons, is it?

A. Fifty tons is the difference.

Q. In the Menominee Range, do you find a discrepancy?

A. In the Menominee Range we found a discrepancy of 270,000 tons, which, as near as I could determine, is due to a transposition of figures in reading off totals from the Iron Trade Review's statements. There is one of the totals which reads, I believe it is, 964,000 and some odd tons, and if that were read 694,000 it would give that difference. That is the only way that I could explain that.

Q. Then the correct figure for the Menominee Range shipments from 1907 to 1911 is 20,668,181?

A. Yes, sir; that is as far as I am able to determine, without having access to the records of our company in Duluth, to check up any details. This is according to the Iron Trade Review's statements.

Q. Now, have these same corrections been carried into the group of figures immediately below, in which the tonnage is divided between the Steel Corporation and the other operators?

A. The total tonnage of the United States Steel Corporation shipped 1907 to 1911 is an independent calculation, by picking out the Steel Corporation mines.

Q. As shown by the Iron Trade Review?

A. As shown by the Iron Trade Review, and the total I obtained is 77,518,369 tons.

Q. For the Mesabi Range?

A. For the Mesabi Range, as against 77,500,419 tons shown on the exhibit. The difference is a little less than 18,000 tons.

Q. To what is that discrepancy due?

A. I cannot explain that from the information available here.

Q. Do all of these Iron Trade Review schedules and tables agree with one another?

A. No, sir; they do not. They sometimes appear to have obtained figures which are not exactly correct, and on the—I believe it is the report of 1912—they make a correction of 30,000 tons which was left out from the 1903 shipments. That is shown as a foot note on that 1912 report.

Q. Substantially, however, the Iron Trade Review figures are correct, are they?

A. Substantially they are very correct.

Q. The other corrections on this exhibit which is before you are those that are made necessary by the corrections that you have explained?

A. Yes, sir. The others result from these three changes.

Q. And with these exceptions that you have mentioned are these statements correct?

A. They are.

Q. Now I show you Exhibit 104, entitled "Statement showing tonnages of merchantable iron ore for Lake Superior district by ranges, January 1st, 1912," and ask you whether you personally have checked that statement, and if so with what original documents?

A. I have checked the statement. The Steel Corporation tonnages for the Mesabi range checked with the tonnages which were reported to the Minnesota Tax Commission as of 1912 and with the corrected tonnages on which the 1912 assessment was based.

Q. How about the other interests' tonnage on the Mesabi for 1912?

A. I would like to say that adjustments have been made in this Steel Corporation tonnage by adding to it the Steel Corporation's tonnage in the Mahoning, Biwabik and Union mines, and deducting from the Corporation the ore in the Hill properties which the Corporation does not expect to mine previous to January 1, 1915.

Q. You say you have deducted from the Steel Corporation's tonnage all of the Hill ores except that tonnage which was prepaid and not taken out up to January 1, 1912; also the minimums for 1912, 1913 and 1914?

A. Yes, sir.

Q. And the balance of the Hill tonnage is shown in the tonnage of other interests?

A. In the tonnage of other interests.

Q. Where do you get the tonnages for the Vermillion range as shown on this exhibit?

A. The Vermillion range tonnages are those which agree with the records of the Minnesota Tax Commission. The Steel Corporation tonnages were reported by us to the tax commission and verified by their engineers; and the independent in-

terests, which are 648,236 tons, were obtained from the records of the tax commission.

Q. How about the Michigan ranges? Have you checked those figures?

A. I have.

Q. With what?

A. The information was obtained from Mr. Finlay's report to the Michigan Tax Commission.

Q. Do those figures check with the figures given in Mr. Finlay's report?

A. They do, making corrections for the Steel Corporation's proportion of ownership in the Lake Superior and Queen group of mines, and in the Pewabic.

Q. The Cuyuna tonnages are those given by Mr. Zapffe in his testimony in this case?

A. They are.

Q. Have you verified the calculation of percentages that appears in this exhibit?

A. I have.

Q. Are those correct?

A. They are correct.

CROSS EXAMINATION

By Mr. Colton:

Q. You say the tonnages for the Cuyuna range are those given by Mr. Zapffe?

A. Yes, sir.

Q. Are you familiar with the question of whether Mr. Zapffe made any distinction between developed ore and probable ore, or do you just take 417,000,000?

A. I was instructed by Mr. Sebenius and Mr. Olcott to use that figure—417,000,000.

Q. You do not know whether that is the maximum figure used by this Mr. Zapffe or not?

A. No, sir; I do not.

Q. You know nothing about the Cuyuna range?

A. I heard the testimony here in regard to it.

MR. REED: You do not offer this as any judgment of your own on that subject?

THE WITNESS: No, sir; I do not.

By MR. COLTON:

Q. As to the Hill tonnage, on January 1, 1912, all of that tonnage was of the United States Steel Corporation, was it not?

A. That is my understanding.

Q. But, for the purposes of this exhibit, you have treated the Hill tonnage, with the exception of the minimums from January, 1912, to January, 1915, and the prepaid tonnage, as a part of the other interests than the United States Steel Corporation? Is that right?

A. I have treated the minimums and the prepaid tonnage as part of the Steel Corporation's.

Q. And everything else as a part of other interests?

A. And everything else as a part of other interests.

Q. What are these penciled corrections on this exhibit, Mr. Diehl?

A. Those are totals of three items which are generally classed as the Menominee range—the Menominee, Crystal Falls and Iron River districts, which are made for my personal information.

Q. Well, did you find any correction to be made in the exhibit entitled "Statement showing tonnage of merchantable ore for Lake Superior district by ranges"? Did you find any correction from an arithmetical point of view?

A. No correction.

Q. How is this tonnage opposite the Menominee range and under the Steel Corporation, of 11,416,500 tons, found in Finlay's report, if at all?

A. It is given by mines. I picked out the individual mines belonging to the Corporation and totaled them up.

Q. You used your knowledge of the mines of the Corporation to get that total?

A. The ownership is also given.

Q. The ownership of the mine is put in that?

A. Yes.

Q. And that is true of each of the other totals appearing under the heading of Steel Corporation Tonnage down from the Menominee through the Gogebic?

A. Yes, it is.

MR. REED: How about the Pewabic?

THE WITNESS: That is given in Finlay's report, I think, under the Pewabic Company.

By MR. COLTON:

Q. And you would have to make a correction for that?

A. I would have to make a correction for that.

Q. And you have made a correction for that, and is there any other mine in that region that you corrected for?

A. The Lake Superior group of mines, and the Regent. Those are on the Marquette Range, in which the Steel Corporation owns a three-quarters interest, and the Cleveland-Cliffs Company one-quarter.

Q. And wherever these 417,000,000 appear on the Cuyuna Range in the exhibits, to which you have just testified, you got it from the same source?

A. I did.

Q. So far as the reserves appearing in the exhibit headed "Statement showing iron ore properties in the Lake Superior district belonging to the Steel Corporation, date of acquisition and tonnages as of January 1, 1912," so far as the reserves of April 1, 1901, are concerned, your connection with this exhibit is purely one of arithmetic, is it not?

A. As far as that column is concerned, it is; that entire column is purely a matter of arithmetic, the sum of the other preceding two.

Q. Is there any portion of this exhibit that you had any connection with, other than just as a matter of arithmetic?

A. I am familiar with all of the properties of the Corporation, and especially the Minnesota properties.

Q. I am now speaking of the preparation of this exhibit: did you have anything to do with it as a matter of judgment?

A. I do not quite understand your question.

MR. REED: Is there any judgment expressed in it?

By Mr. Colton:

Q. Yes, is there any judgment expressed in this exhibit, from your point of view?

A. No, it is a statement of fact.

Q. It is a statement of fact taken from what sources?

A. From the records of the Oliver Iron Mining Company, and the tonnage figures from Mr. Finlay's report to the Michigan Tax Commission, and from figures which agree with the records of the Minnesota Tax Commission.

Q. Now, what tonnages are taken from the Oliver Iron Mining Company, if any?

A. Tonnages?

Q. Yes.

A. These shipments were prepared from the records of the Oliver Company.

Q. Are those shipments the only things that were taken from the records of the Oliver Iron Mining Company?

A. I do not know how far you would call the records of tonnages Oliver Company records or Tax Commission records.

Q. You got them from the Tax Commission finally? I mean your final source of information was the Tax Commission?

A. Finally it was. We are compelled to report every year to the Tax Commission.

Q. And you used the tonnages of the Tax Commission in the column entitled "Reserves as of January 1, 1912?"

A. I did.

Q. Excepting that in arriving at the reserves as of January 1, 1912, you treated all the Hill property, with the exception of that set forth in section 2, page 4, as belonging to other interests than the United States Steel Corporation; is that correct?

A. It is.

Q. And the total amount of tonnage appearing on section 2, page 4, is how much?

A. That question covered what?

Q. The total amount of Hill tonnage appearing on that page; make it read that way.

A. That is eighteen million, eight hundred and some odd thousand tons. I would have to add it up to get the exact figure.

Q. At this date of course the Hill tonnage, as you understand it, was still in your possession, the same as you testified as to the other exhibit?

A. On January 1, 1912, I understand that it was in our possession.

Q. By the Hill tonnage I mean the tonnage contained in the lands which were leased to the Steel Corporation on January 2, 1907.

A. Yes.

MR. REED: By lease dated that date?

MR. COLTON: Dated that date, yes.

By MR. COLTON:

Q. Are there any shipments in the exhibit entitled "Statement showing iron ore properties in the Lake Superior district belonging to the United States Steel Corporation," taken from the Iron Trade Review?

A. Not that I know of; I compared the figures in the statement with the figures published in the Iron Trade Review.

Q. And they are substantially the same?

A. They are substantially the same; the statement was prepared from the records of the Oliver Company.

Q. Now, referring to the Iron Trade Review statements of shipments from the different ranges, I show you Exhibit No. 437, entitled "Iron Trade Review, Lake Superior Iron Ore Shipments, Gross Tons for 1909 and Previous Years," and I ask you whether or not your source of information for shipments from the various ranges, as set forth in the exhibits as to which you have testified, as coming from the Iron Trade Review, is from similar information as this?

A. It is.

Q. Do you know whether you used this particular paper entitled "Iron Trade Review, Lake Superior Iron Ore Shipments, Gross Tons for 1909 and Previous Years," do you know whether you used that particular one?

A. I did not.

Q. What one did you use?

A. The statement for the following year, 1910, and preceding years, and the one published the year following, which gave 1911.

Q. As I understand it, these statements of shipments gotten out by the Iron Trade Review are corrected from year to year, so that there will be occasionally a correction made in one year that will not appear in the other, but that as a rule they make no substantial difference in the figures?

A. As a rule they do not; they are minor corrections.

Q. The various properties you knew yourself, or did you take those as reported to the Commission, as designated under the first column of the exhibit, "Statement showing iron ore properties in the Lake Superior district"?

A. I know those containing ore. This list contains also a number of descriptions which do not contain ore, are not ore-bearing, but those were taken from the company's records and are reported to the Tax Commission.

Q. What I am trying to get at is, this comes direct from the Tax Commission, does it?

A. Yes; I compared these descriptions and the corresponding tonnages with a copy of a statement that is in the records of the Tax Commission, with the corrections made.

Q. Was this tonnage of 77,518,369, as total shipments of the United States Steel Corporation, taken from the records of the United States Steel Corporation or taken from the Iron Trade Review?

A. Those are my own figures, taken from Iron Trade Review statements.

Q. And the same is true of the total by all operators?

A. That is the difference between the Steel Corporation shipments and the total.

Q. But the total was taken from the Iron Trade Review?

A. Yes, it was.

Q. Now, as to the ore reserves appearing on Exhibit entitled "Statement showing (a) tonnages shipped; (b) average yearly shipments; (c) ore reserves as of January 1, 1912," the ore reserves as there set forth are taken from the previous exhibits?

A. They are.

Q. Concerning which you testified?

A. Yes, sir.

(The following stipulation was entered upon the record by consent of counsel):

It is agreed that Exhibit No. 103 may be corrected now according to the testimony of Mr. Diehl, and that it shall be printed in its corrected form.

By Mr. Colton:

Q. You were instructed to treat the Hill tonnages in the manner you treated them in this exhibit, were you?

A. I was.

Mr. Colton: That is all.

Mr. Reed: That is all, Mr. Diehl.

CHARLES CATLETT

was called as a witness on behalf of the Defendants, and being first duly sworn, testified as follows:

DIRECT EXAMINATION

By Mr. Reed:

Q. Where do you live?

A. Staunton, Virginia.

Q. What is your occupation?

A. I am a chemist and geologist.

Q. How long have you been a chemist?

A. I graduated from the University of Virginia in 1886. I was subsequently one of the chemists of the United States Geological Survey for a couple of years, and then resigned to take up private practice and started a laboratory in Staunton in 1890 or 1891. I have maintained that laboratory since.

Q. How long have you been a geologist?

A. I studied geology at the same time, and commenced shortly after leaving college economic geological work. I have continued that up to the present time.

Q. Are you in the employ of the United States Steel Corporation?

A. No, sir.

Q. Mr. Catlett, have you had occasion within recent years to visit the Birmingham district and examine the iron ore deposits in that district?

A. I have, a number of times.

Q. What was your first acquaintance with the Birmingham district?

A. I first went to the Birmingham district in 1889, and I have a number of times since then had occasion to go there and examine individual properties. Since 1902, I suppose, I have been there once or twice in each year.

Q. Did you have occasion to go to Birmingham in the latter part of the year 1907?

A. I did.

Q. At whose request did you go to Birmingham?

A. At the request of Mr. Gayley, of the Steel Corporation.

Q. What were Mr. Gayley's instructions to you at that time?

A. Mr. Gayley asked me to meet him in New York, and he said to me, "We have had to buy property, and we would like to know what we have."

Q. When was it he told you that?

A. I think it was in the early part of November, 1907.

Q. The early part of November or December?

A. November.

Q. November?

A. Yes.

Q. Did you go to Birmingham then?

A. I did.

Q. With anyone?

A. No, not to start. Mr. Gayley said he wished to associate with me one of the company's geologists, but asked me to go ahead by myself and commence to collect information as quickly as possible. I was subsequently joined by Mr. Merriam, and we made our investigation—much of our investigation jointly, and our report jointly.

Q. When did you complete your investigation?

A. We made a preliminary report in December, which, however, was preceded by short letters, and I think possibly one personal meeting with Mr. Gayley, and we subsequently spent four or five months in the district and furnished a completed report in the spring of 1908.

Q. Have you seen Exhibit No. 100, the report purporting to be signed by you and Mr. Merriam?

A. I have.

Q. I call your attention to Defendant's Exhibit No. 100, being a report on iron ore properties of the Tennessee Company made in June, 1908, and purporting to be signed by W. N. Merriam and Charles Catlett, and I ask you whether you have recently examined that exhibit.

A. I have.

Q. Is that a summary of the reports made by you and Mr. Merriam on the Tennessee Company's ores?

A. It is.

Q. I wish that you would tell us generally what was the location of the outlying lands that are mentioned in that exhibit?

A. A portion of these lands were in Tennessee, and a portion of them north of Morrow's Gap.

Q. I call your attention to Defendants' Exhibit No. 107, which seems to mark out the district between Spark's Gap and Morrow's Gap, and ask you whether any of these properties that were called outlying lands in your report, Exhibit 100, are included within the area that is defined by black and red lines on Exhibit 107.

A. I am not absolutely certain whether they were or not, but I believe that the outlying lands were all outside of the boundaries there referred to.

Q. In any event the township numbers of the outlying lands are stated on your report, are they not? Do you remember?

A. Of course it was in the full written report, but on the summary to which you refer I am not certain whether that is shown or not.

Q. The exhibit itself will show.

Have you been familiar with the Birmingham district since 1907, Mr. Catlett?

A. Yes, sir; I think that two or possibly three times every year I have had occasion to go there and examine some one or more properties.

Q. And your familiarity has continued right along since 1907?

A. Yes.

Q. When you went there in November, 1907, did you make any investigation to ascertain the efficiency of the blast furnaces of the Tennessee Company?

A. In my discussion with Mr. Gayley I was impressed with the fact that Mr. Gayley was not fully advised as to southern conditions, and therefore when I reached there in advance of Mr. Merriam, I sought to collect as quickly as possible information which I thought would be of service to him in enabling him to determine the value of those properties which had been acquired and the best way in which to handle them. The first thing I did was to get hold of the furnace records. I went to the auditing department and saw the original records and had them prepare under my direction a statement setting forth the facts which I believed would particularly appeal to Mr. Gayley. I have a duplicate copy of that statement with me, and there are some points of it which I think are exceedingly striking.

Q. Did you get any statement of blast furnace costs and practice for September, 1907?

A. I did.

Q. Would you produce that, please, Mr. Catlett?

(The witness produced a paper which was marked "Defendants' Exhibit No. 114.)

Q. I call your attention to Defendants' Exhibit No. 114, Mr. Catlett, and ask you what that is?

A. That is a duplicate copy of the statement to which I referred as having been prepared under my directions in the auditing department of the Tennessee Coal, Iron & Railroad Company in November, 1907, and which I sent to Mr. Gayley.

Q. When was that duplicate copy made?

A. At that time. I have retained it in my possession since then.

Q. And this Exhibit 114, just produced by you, is one of the copies made at Birmingham at that time, in 1907, is it?

A. It is.

Q. Are you familiar with the costs of other companies then operating in the Birmingham district?

A. I had occasion and opportunity from time to time to see cost sheets of some of the other companies, and had acted in a consulting capacity for the Alabama Consolidated Coal & Iron Company that were operating three furnaces in that district, and in that way was thoroughly familiar with the ordinary costs of the district.

Q. Were you familiar also with the costs of furnace work and pig iron production in Russellville?

A. I had had the opportunity then to see at least one detailed cost sheet. I have since had opportunity to see others.

Q. Mr. Catlett, I want to call your attention to some of the items that appear on Exhibit 114. To begin with, what is the crucial test of good or bad furnace practice? What item does an experienced man first look to when he finds a blast furnace cost sheet?

A. I would say that, taking everything into consideration, the question of coke consumption measures the efficiency in all departments, including the quality of the raw material. It is possible for a furnace as a tool to do good work and still the results to be very unsatisfactory commercially; but if the coke consumption is high it indicates that some link in the chain of production is bad.

Q. Now, let us take this item of coke consumption in the Tennessee Company's furnaces in September, 1907. To begin with, was furnace No. 1 then running?

A. It was not.

Q. Take furnace No. 2. How many pounds of coke did that furnace take at that time to make a ton of pig iron?

A. 5,006 pounds of coke in September to make one ton of pig iron.

Q. How does 5,006 pounds of coke per ton of pig iron compare with the usual efficiency in blast furnace practice?

A. It was in excess of anything which I had ever known up to that time.

Q. In the Birmingham district only, do you mean?

A. Or in any other district. I had no personal knowledge of work in the northern furnaces, but I had some knowledge of the work in the Virginia and Tennessee districts.

Q. Take some of these other coke consumptions. I notice that furnace No. 3 was using 4,439 pounds of coke per ton of pig iron. Is that high or low?

A. That is also higher than any other figure that I had ever seen up to that time.

Q. Take furnace No. 4, using 2,991 pounds; how is that figured?

A. That was a fair return, based upon the burden as shown at that time. That furnace carried about one-fourth of the burden in brown ore.

Q. How about furnace No. 5, which seems to have used 3,302 pounds?

A. That was high.

Q. No. 6, which appears to have used 3,437 pounds?

A. That was also high.

Q. How do those figures compare with the cost at other southern furnace plants?

A. I would say that the average coke consumption, as I knew it up to that time, where they were using the red ore only, would run about 3,300 pounds per ton of iron, but where they were able to mix a fair proportion of brown ore with it, the normal coke consumption was about 3,000 pounds, and this would get less as the proportion of brown ore increased.

Q. Take the average coke consumption of the company, which appears to be 3,812 pounds per ton of pig iron over all the blast furnaces of the Tennessee Company; how did that compare with the usual quantity of coke consumed in making iron throughout the South?

A. It was high, very high.

Q. Did you ever know any group of furnaces whose production ran as high for a month as those of the Tennessee Company appear to have run in that month under consideration, whose coke consumption ran as high as that?

A. No, sir.

Q. In other respects, how was their practice, Mr. Catlett?

A. In some respects the practice was very good, but the sum total was bad, and the cost for the manufacture of iron was high.

Q. What was the average cost of making pig iron for that company in the month of September, 1907?

A. $11.88.

Q. That is furnace cost, is it?

A. Yes.

Q. Does that allow any interest on the investment?

A. No, sir.

Q. Does it allow anything for depreciation?

A. No, sir.

Q. Does it allow anything for general office expense?

A. No, sir, except the plant expenses.

Q. Except right at the plant itself?

A. Yes.

Q. How do these costs compare with the costs of other Southern furnaces with which you are familiar?

A. They were higher than the cost of other Southern furnaces with which I was familiar.

Q. You know the cost of some of the other companies in the Birmingham district?

A. I do.

Q. Were these higher than their costs?

A. Yes.

Q. You knew the cost of some of the furnaces in the Russellville district, did you?

A. As I stated, I have had an opportunity to see one report at that time, of a furnace in Russellville. I have since had an opportunity to see some additional reports in that district.

Q. How do these costs compare with the Russellville costs?

A. They were high as compared with Russellville costs.

Q. Where is Russellville?

A. In the northern part of Alabama.

Q. About how far from Birmingham?

A. At a guess I would say about 100 miles, but I may be wrong about that.

Q. It is some distance away?

A. Yes.

Q. Do you know anything about the properties of the Sloss-Sheffield Steel Company?

A. Only in a general way.

Q. Have they furnaces at Russellville?

A. Yes.

Q. Have they furnaces also at Birmingham?

A. Yes.

Q. In which district can they make iron or steel cheaper?

A. They have made iron cheaper in the Russellville district than they have in the Birmingham district.

Q. The Russellville district is the center of the brown ore deposits, roughly speaking, is it not?

A. Certain of the brown ore deposits.

Q. Very large brown ore deposits?

A. Very large.

Q. And these Russellville furnaces run on brown ore almost entirely, do they not?

A. Yes.

Q. After you had made your examination there at Birmingham of the blast furnaces and of the iron mines, did you make any recommendations as to further purchases?

A. I did.

Q. To whom?

Mr. Dickinson: Objected to as irrelevant.

The Witness: Mr. Gayley.

By Mr. Reed:

Q. When did you make those recommendations?

A. I made them from time to time, and a number of them were repeated. I can not say exactly when those recommendations were made.

Q. I wanted to get the general period. In what year, if you can tell us that.

A. I commenced to make recommendations to make certain

purchases shortly after I got there, and shortly after I had been able to obtain some general information.

Q. Did you recommend any purchases of iron ore properties?

A. Yes.

Q. To Mr. Gayley?

A. Yes.

Q. Within a few months after you reached Birmingham?

A. I did.

Q. What recommendations did you make to him? Just tell us what happened.

Mr. Dickinson: That is objected to as irrelevant.

The Witness: In a general way I recommended to Mr. Gayley that the Steel Corporation purchase the other larger operating companies in the district. I made this recommendation for two reasons; first, because the locations of the properties were such that very great advantage could be gotten from the economy and convenience of operation if they owned the other companies; and next, because I thought they would not object to owning a control of the district, and that the result of such control would mean a development which I believed would be to the interest of the South.

Mr. Dickinson: His reasons are objected to as incompetent.

By Mr. Reed:

Q. Was any action taken upon your recommendation to purchase other properties?

A. To my astonishment, not the slightest interest was shown in the question of additional acquisitions, and none were purchased.

Q. What companies did you recommend should be purchased?

A. The Birmingham Coal & Iron Company was one that I recommended should be purchased, because it was in the hands of a receiver, and could have been purchased, I thought, at a low price. This property has since been acquired by the Woodward Iron Company. I recommended that the Sloss-Sheffield Coal & Iron Company be purchased, because at that

time it was one of the largest producers of foundry iron in the district, and its land was contiguous to the land of the Tennessee Coal, Iron & Railroad Company, and I believed that it could be purchased at a fair price. I also suggested the purchase of the Republic Iron holdings in Alabama, and the purchase of the Woodward Iron holdings in Alabama.

Q. Was any action taken on any of those recommendations?

A. There was no action taken and no interest shown in that particular recommendation.

Q. Did you recommend any purchases of iron ore properties, as distinguished from operating companies?

A. I did. The Tennessee Coal, Iron & Railroad Company properties had been purchased in large bodies, and without any special effort to block them up. The result was that there was no single property which the Tennessee Coal, Iron & Railroad Company had which I did not believe could be greatly relatively increased in value and made far more easy for operating purposes by comparatively small and reasonable purchases—additional acquisitions of land, and I made such recommendations.

Q. What action was taken on them?

A. Up to the time that I ceased to have close connection with the work, in 1908, no action was taken and no such purchases were made.

Q. So far as you know, have any purchases of those lands that you recommended be bought been made by the Steel Corporation?

A. So far as I know they have not been, and from reliable—what I consider reliable hearsay evidence, none have been.

Mr. Dickinson: We object to the witness stating what he considers reliable hearsay as incompetent.

Mr. Reed: Of course, we do not want hearsay evidence, Mr. Catlett.

Q. Into what hands have these lands since come that you recommended the Steel Corporation to buy?

A. With the exception of the Birmingham Coal and Iron

Company of which I have spoken, I do not know who has purchased these properties.

Q. Do you know that they have since been purchased by some outside interest?

A. That is my information.

Q. Do you know anything about a purchase within the last four months by the Standard Steel Company?

A. No, sir.

MR. DICKINSON: That is objected to as incompetent and irrelevant.

By MR. REED:

Q. Do you know anything about a purchase by any steel company in the Shade's Valley district within the past four months of about 140,000,000 tons?

A. Not of my own knowledge. I have seen such statements.

Q. Any knowledge of such a purchase would be hearsay, would it?

A. Yes, sir.

Q. Mr. Catlett, what can you tell us as to the brown ore reserves of the northern Alabama and eastern Tennessee districts?

A. I have had occasion to visit those districts several times, and to examine individual properties. I have made no detailed study of the district as a whole.

Q. Is there any large quantity of brown ore in those districts?

A. Based upon geologic evidence and from the sections I examined, I am confident that there are very large deposits of brown ore in that section.

Q. Do you know whether the Tennessee Company owns any considerable amount of brown ore in that region?

A. They own none, to my knowledge.

Q. Did they own any at the time you made your examination——

A. They did not.

Q. (Continuing) and valuation of these properties in 1907 and 1908?

A. They did not.

Q. Are there any steel companies now running on those brown ores?

A. No, sir.

Q. Are there any furnace companies now running on them?

A. The Sloss-Sheffield Coal & Iron Company has two furnaces there, one of which I know to be in operation. I do not know whether the other one is or not.

Q. There are a number of other furnaces in eastern Tennessee, are there not?

A. Yes, sir.

Q. Running on these brown ores?

A. The Mannie furnaces, at Allen's Creek, and there are a number of other small furnaces that are working on the ores from this same geological horizon, in Tennessee, or were working on them when I was last in that district.

Q. When was that, Mr. Catlett?

A. It was four years ago when I was at Allen's Creek, and two years ago when I was at Sheffield.

Q. Now, there are some brown ores also in Georgia, are there not?

A. Yes, sir.

Q. Are you familiar with those?

A. I have had occasion to examine a number of individual properties.

Q. Have you made an estimate of the total quantity of brown ore in Georgia, Alabama and southeastern Tennessee?

A. No, sir.

Q. Can you make an estimate of the quantity of brown ore available there?

A. No, sir.

Q. The Tennessee Company owns some brown ore in northern Alabama, does it not?

A. I would say it is not in the northern part of Alabama. They own some brown ore to the west of Birmingham, and not a great distance north of Birmingham, but not in what would be called the northern part of Alabama.

Q. They do own some brown ore in Alabama, though?

A. Yes. The estimated tonnage at that time was 3,000,000 tons.

Q. Contrasting the tonnage of brown ore belonging to the Tennessee Company with the other reserves of brown ore of Alabama, Georgia and southeastern Tennessee, with which you are familiar, what percentage would the Tennessee Company's holdings of brown ore bear to the total of the deposits of which you yourself know?

A. I should say it would bear but a small percentage; proportionately but a small percentage.

Q. Would you say less than ten per cent.?

A. Of the properties which I know, I would roughly say about ten per cent.

Q. Have you made any study, Mr. Catlett, of the brown ores of Texas?

A. I have had occasion to examine one property there, or one ownership there, consisting of a number of properties.

Q. In what county was that?

A. It was mainly in Cass County.

Q. Partly in other counties?

A. It passed over into Marion County, and the edge of it was in Upshur County; but the principal portion of it was in Cass County.

Q. For what company or interest did you have occasion to examine those properties?

A. I made an examination in the interests of the Atchison Railroad, that had been asked to make certain railroad connections into that district.

Q. When was that that you made that examination?

A. That was in 1910.

Q. How long did you spend on that examination?

A. About ten days.

Q. How many square miles of territory did you cover in your examination?

A. The ownership which I examined amounted to about 32,000 acres, which would be roughly in the neighborhood of 50 square miles.

Q. Will you describe the deposit of ore that you found on that property?

A. The ore consists of a very thin bed, and is the hardest measure of the measures in that section. The result is that under the effect of erosion, the ore is left commonly topping the hill, and very closely coinciding with the surface. It is cut out in the hollows, and is commonly found upon the plateaus.

Q. How is this ore covered? What stripping is necessay, if any?

A. In many places there is no covering at all existing, but as a rule it is found within a few feet of the surface.

Q. And what is the covering, where there is a covering?

A. Soft, sandy loam.

Q. Is this material difficult to remove?

A. No; it is very easy to remove.

Q. I mean the stripping, of course?

A. No; it is very easy to remove.

Q. What is the usual depth or thickness of this bed of iron ore?

A. At times it is a solid bed, and at times it is more or less scattered through this soft material. I would say, roughly, however, that the bed of ore through that section would correspond to a solid bed that would be about two feet thick; possibly a little less.

Q. Does it ever get any thicker than that?

A. Oh, yes; at times it is very much thicker than that, but I would say that a fair average would be a little less than two feet, corresponding with a solid ore.

Q. What opportunities for examining this had you? Were there mining operations being carried on?

A. No. There were some pits upon the properties, but the examination was mainly confined to surface exposures, or natural exposures, where erosion had washed off the covering and had exposed the bed.

Q. How did you ascertain the thickness of the bed?

A. It is possible to measure it at a number of places where it is exposed naturally, but there were pits where I could also make measurements.

Q. Is this ore broken up at all, or does it have to be blasted out?

A. It is commonly loose, but sort of in the neighborhood of a hard pan. Ordinarily there is some loosening up with powder required, and probably that would be more economical, but it can be picked out.

Q. What percentage of the total iron of the region did your examination cover?

A. I have no personal knowledge of the extent of the region as a whole.

Q. You have some knowledge of the geology?

A. The general geology of the district was easily seen in the process of my trip into the section and across it, so that I have a pretty clear general idea of the geology over a very much larger territory than that I specifically examined. The conditions were the same, and I would expect the same general conditions to obtain over a very large territory.

Q. This 50 square miles that you examined was not a large part of the iron-bearing territory of northeastern Texas, was it?

A. It was not a large part of what I actually saw. I understood it was but a small part of the district as a whole.

Q. What tonnage of brown ore did you estimate that there was contained in this property which you yourself personally examined.

A. I was not willing, from the information available, to make any definite estimate as to tonnage. The conclusion that I reached was that the conditions were favorable enough to warrant the expenditure of whatever might be necessary to thoroughly prove up the district before the extension of the road was undertaken; and I recommended that that be done.

Q. What was the quality of this ore?

A. The quality was very good.

Q. You took samples of it, did you?

A. Yes.

Q. How did it run in iron?

A. The average samples which I took ran something over 50 per cent. metallic iron.

Q. It is a hematite, is it not?

A. It is a brown hematite, and would correspond roughly with a red hematite running over 60 per cent.

Q. Why would it correspond——

A. I beg pardon; not over 60—yes, it would correspond to a red hematite running something over 60.

Q. The Mesabi ore is a red hematite, is it not?

A. Yes.

Q. Why would it correspond to a red hematite running over 60 per cent?

A. The brown hematite is a red hematite combined with a certain amount of water of crystallization. That water is driven off very readily in the upper part of the furnace, leaving the ore very porous, and increasing, by driving off the water, the percentage of iron and the other fixed constituents by that much.

Q. In other words, it contains a quantity of what is known as combined water?

A. Combined water, yes.

Q. As distinguished from hydroscopic water or moisture?

A. Yes.

Q. Is this Bessemer or non-Bessemer ore, this Texan ore?

A. It is non-Bessemer, but it is low enough in phosphorus to be of special value in foundry trade.

Q. Would it be a useful ore from which to manufacture open hearth steel?

A. Yes.

Q. How far was this deposit that you examined from the Gulf of Mexico?

A. It was about 235 miles.

Q. How far does the body of this Texan ore lie from the Gulf?

A. My information is that it is very much nearer to the Gulf than that.

Q. This was on the upper edge of the area, was it?

A. Yes.

Q. Have you considered the question of availability of the Texan ore for use on the east coast of the United States?

A. I investigated at the time the question of bringing that ore to the eastern coast for sale.

Q. At present prices of ore and iron in the United States would it be a commercial proposition; that is, could it be done with commercial success?

MR. DICKINSON: That is objected to as too general and vague.

THE WITNESS: My estimate was that it could be delivered in Philadelphia at a fair margin of profit above cost, based upon the information which I secured.

MR. DICKINSON: That is objected to because it is partly based on hearsay evidence, and as incompetent.

By MR. REED:

Q. Is any company at present engaged in the development or marketing of that Texan ore?

A. I do not know the name of the company, but the parties who control the properties that I examined have been instrumental in the building of a dock at Port Bolivar, have arranged for mining the ore, and have actually shipped one cargo to Philadelphia.

Q. With what steamship line, if any, have those people made arrangements for shipping the ore?

MR. DICKINSON: Objected to as secondary evidence and hearsay.

THE WITNESS: I saw a letter from the Mallory Steamship Company offering to transport the ore at $1.22.

By MR. REED:

Q. Between what points?

A. Between Port Bolivar and Philadelphia.

Q. Mr. Catlett, outside of this area in the Birmingham district that lies between Spark's Gap and Morrow's Gap are there any deposits of red ore of sufficient size, in veins large enough to be mined to commercial advantage, and of sufficient iron content to be smelted with commercial success in the southern district?

A. Yes.

Q. Tell us the location of some of them.

A. At Attalla, Alabama, the same bodies geologically have been developed and operated for a great many years.

Q. Is any steel being made at Attalla?

A. Yes.

Q. What company is making steel there?

A. What is now known as the Standard Steel Company, formerly known as the Southern Iron & Steel Company, has a steel plant at that point.

Q. Are there any blast furnaces there besides the steel works?

A. Yes, the steel company has one blast furnace, and the Alabama Consolidated Coal & Iron Company have two furnaces at Gadsden, which is a few miles from Attalla.

Q. Are there any other furnaces in that general district?

A. There are a number of furnaces in what is known as eastern Alabama which are operated mainly on the brown ores of that section. The Alabama Consolidated Coal & Iron Company have two furnaces at Ironton, and the Anniston Furnace Company have one, if not two, furnaces at Anniston, and there are several other furnaces in that section.

Q. How long has this steel works at Attalla been in operation? When was it built? If you cannot fix the exact date can you tell us whether it was built before or since November 1st, 1907?

A. It was in operation previous to that time, I think.

Q. Are there any other steel works in that general district?

A. The only one I know of is a small plant at Atlanta.

Q. Now, in eastern Tennessee are there furnaces that operate on those red ores?

A. There are.

Q. Where are some of them?

A. One is at Chattanooga. At that time there were two at Chattanooga, now only one, one at Dayton, and two at Rockwood that are working upon these red ores.

Q. Have you ever tried to make an estimate of the quantity of this red ore that was available outside of the immediate Birmingham district?

A. I have not.

Q. In what states does it extend, through what states?

A. It stretches all the way from Alabama to New York. I have myself seen it at least in Pennsylvania, Virginia, Tennessee, Georgia, Alabama and in New York.

Q. To get a monopoly of this ore would require a good deal of buying, would it not?

A. Yes.

Q. Does it exist in workable quantities in all of these states that you have mentioned?

A. It has been worked in all of those states. The principal development of it is in New York, Tennessee and Alabama. It is thin in Virginia, and worked to only a small extent in Pennsylvania.

(Whereupon an adjournment was taken until tomorrow, Thursday, October 16, 1913, at 10:30 o'clock a. m.)

NINETY-SIXTH DAY.

EMPIRE BUILDING,
71 Broadway, New York City.

Thursday, October 16, 1913.

Before Special Examiner HENRY P. BROWN.

Present on behalf of the United States, MR. DICKINSON and MR. COLTON.

Present on behalf of the Defendants, MR. LINDABURY, MR. SEVERANCE, MR. BOLLING and MR. REED; also, on behalf of the Great Northern Iron Ore Interests, MR. CHESTER W. CUTHELL.

CHARLES CATLETT,

the witness under examination at the taking of adjournment, resumed the stand.

DIRECT EXAMINATION (Continued)

MR. REED: The defendants offer in evidence Defendants' Exhibit No. 114, being cost sheet for September, 1907, of the Tennessee Coal, Iron & Railroad Company.

MR. DICKINSON: This is excepted to as irrelevant and also on the ground that it only represents the operations of one month.

(The paper referred to was thereupon marked "Defendants' Exhibit (Catlett) No. 114, October 16, 1913," and will be found in the volume of exhibits.)

By MR. REED:

Q. At the time Exhibit No. 114 was prepared for you, were the October costs compiled? That is, was it possible for you, at that time, to get any later months' costs?

A. It was not.

Q. Mr. Catlett, what has been your connection with the Sloss-Sheffield Steel & Iron Company?

A. I have no direct connection with them.

Q. Have you advised them in a consulting capacity at any time?

A. I have not.

Q. Have you any knowledge of their earnings for the years 1906 and 1907?

A. When I went to Birmingham in 1907 I got all the information I could in regard to the other companies, and among others I secured information as to the operations for 1906, and subsequently obtained those for 1907 of the Sloss Company.

Q. Did you also secure information as to the earnings of the Tennessee Company for those years?

A. Yes, sir.

Q. How many blast furnaces had the Tennessee Company at that time?

A. They had in the Birmingham district proper fourteen, and they had in Tennessee two that were in process of being dismantled—there were fourteen, twelve of which were in operation.

Q. How many blast furnaces had the Sloss-Sheffield Steel & Iron Company?

A. They had six.

Q. All in operation during those years?

A. My recollection is that they were all in operation at that time.

Q. The Tennessee Company had a steel works there also, had it not?

A. Yes, sir.

Q. Had the Sloss Company steel works, too?

A. No, sir.

Q. What were the earnings of the Sloss Sheffield Company applicable to the payment of dividends for the years 1906 to 1907?

MR. DICKINSON: I object to this on the ground that he has not shown the sources of his information, what his information was, and that a mere conclusion of the witness is called for.

THE WITNESS: I prepared some figures from information

which I got at that time, which showed that in 1906 the earnings of the Sloss-Sheffield Company applicable to dividends were $1,000,845, and the earnings of the Tennessee Coal, Iron & Railroad Company applicable to dividends for the same year were $1,087,337.

MR. DICKINSON: This is objected to because the data upon which the conclusion is given by the witness are not shown, and it is secondary and hearsay evidence.

By MR. REED:

Q. In 1907 what were the earnings of the two companies applicable to the payment of dividends?

MR. DICKINSON: The same objection.

THE WITNESS: In 1907 the earnings of the Sloss-Sheffield were $1,479,663, and the earnings of the Tennessee Coal, Iron & Railroad Company were $1,426,684.58.

CROSS EXAMINATION

By MR. DICKINSON:

Q. What was the comparative holding in 1907 in the State of Alabama of merchantable ores by the Sloss Company and by the Tennessee Coal, Iron & Railroad Company?

A. I have made no such estimate.

Q. Do you not know, however, that the ore holdings of the Tennessee Coal, Iron & Railroad Company, of merchantable ore in the State of Alabama, were very much larger than those of the Sloss-Sheffield?

A. Not in my opinion, sir.

Q. Were they not larger in the Birmingham district than all the other iron producers operating in that district in 1907?

A. That was not my opinion, but I made no definite calculation of the tonnages owned by the other companies.

Q. So that really you cannot form any opinion, then?

A. No, sir.

Q. You stated, Mr. Catlett, as I understood you, that you were not in the employ of the defendant. Did you mean by that that you did not appear here as an expert, giving your opinion as such, and expecting compensation?

A. No, sir; I appear as an expert, and I expect to render a bill for my time and expenses.

Q. You do expect to do so?

A. Yes, sir.

Q. And when you spoke of employment, you spoke of constant employment in another sense?

A. Yes, sir.

Q. Have you ever been employed at any time in any other connection than the present one in the way you have described that connection by the United States Steel Corporation or the Tennessee Coal, Iron & Railroad Company, or any of the subsidiaries of the United States Steel Corporation?

A. I have been employed off and on since 1896 by the Carnegie Steel Company, first, and possibly by the Carnegie Steel Company as such since the formation of the Steel Corporation.

Q. Is that the only one of the subsidiaries of the United States Steel Corporation that you have been employed by since its formation?

A. Yes, sir.

Q. This exhibit, No. 100, here shown you, is signed by Mr. Merriam and yourself. Those are not reproductions of any autographic signatures?

A. No, sir.

Q. Did you make that summary yourself?

A. I made, in connection with Mr. Merriam, the summary from which this was taken. Mr. Merriam's office was in better shape for the drafting and reproduction of such work, and this was redrawn and photographically reproduced in his office in Duluth. I compared it at that time with my own autograph calculations and found it to be correct.

Q. You mean to say that this is an exact replica, leaving out the reproduction of the autographic signatures, of the summary which was prepared by you and Mr. Merriam?

A. That is my knowledge and belief.

Q. This is not a photographic reproduction of what you did, is it?

A. No, but it was redrawn in Mr. Merriam's office for the purpose of photographic reproduction.

Q. Was that done after you and he had done the work?

A. Yes.

Q. What other connection did you have with it after you and he had done the work?

A. I went to Duluth for the preparation of our final report and went over matters and the data at that time, and compared the figures with my own autographic calculations.

Q. You mean you compared the figures shown on that summary?

A. I compared the figures shown on the summary.

Q. With your own calculations?

A. Yes.

Q. What is that summary based on, a larger report, as I understand you?

A. This summary is really the report, so far as the iron resources are concerned, but we did make a good many explanations in the way of descriptions of specific properties.

Q. Was there a report showing more *in extenso* and in detail, the facts of which this purports to be a summary?

A. Yes; there was a written report accompanying this which did go more into detail, but this practically covers the results of the written report.

Q. Was that report signed by you and Mr. Merriam?

A. Yes.

Q. And this you say is a summary of what appears in the written report?

A. Yes.

Mr. Dickinson: We object to this summary on the ground that it is only a part of the report submitted, that this is based on details and data appearing in a larger and more extensive report, that this is only part of what was submitted, and that it is secondary, so far as it purports to summarize these original data which are not produced in evidence.

By Mr. Dickinson:

Q. Now, when you went to Birmingham at the request of Mr. Gayley, how long did you stay there, Mr. Catlett?

A. I was there altogether substantially four or five months, with certain visits to New York for consultation, after which I returned to Birmingham.

Q. Is the report of which this is a summary a report which

was based upon these visits to Birmingham which you have described?

MR. REED: He has not said this was a summary of the report.

MR. DICKINSON: I am asking him whether it was; I have not stated that it was.

(At the request of Mr. Reed the question was repeated by the stenographer.)

MR. DICKINSON: I think that is a fair question; I am not saying whether it was or not.

MR. REED: I think you did in your question.

(The question was again repeated.)

MR. REED: I object to that question for the reason that the witness has not stated that this Exhibit 100 is a summary of the report, but has stated that this is a summary of his findings on ore which accompanied the report.

MR. DICKINSON: Let us get a little better understanding of that.

By MR. DICKINSON:

Q. You went there at the instance of Mr. Gayley?

A. Yes.

Q. You were there off and on for a period of four or five months?

A. Yes.

Q. When did you first make a report of the result of your examination there?

A. We made a preliminary report to Mr. Gayley within about thirty days after we reached there.

Q. Was that a verbal or signed report?

A. It was in the form of a letter, as I recall it, stating substantially what we found were the resources of the company.

Q. Have you got a copy of that?

A. I have.

Q. Will you please produce it?

A. I do not think I have a copy of it here, but if I have I will.

(After a search the witness produced the report and handed it to counsel for the complainant.)

MR. DICKINSON: We offer this in evidence as Government Exhibit 440.

MR. REED: No objection.

(The paper referred to was thereupon marked "Government Exhibit (Catlett) No. 440, October 16, 1913," and will be found in the volume of exhibits.)

By MR. DICKINSON:

Q. State, Mr. Catlett, whether or not at the time you were in Birmingham doing the work to make this report, of the then known available commercial ore in the Birmingham district, was not the cream of the district between Sparks Gap and Grace's Gap?

MR. REED: Read that question, please.

(The question was read by the stenographer.)

THE WITNESS: Yes, that was the thickest portion of the district.

By MR. DICKINSON:

Q. You stated in this report, did you not, as follows: "The cream of the district may be said to lie between Sparks Gap and Grace's Gap"?

A. Yes, sir.

Q. Was that a correct statement?

A. Yes, sir.

Q. As you believed?

A. Yes, sir.

Q. Now, from Sparks Gap to Grace's Gap, do you know the extent of the holdings of then known available ore, by the Tennessee Company?

A. Practically all of their ore was within that territory, as is shown by the statement.

Q. Mr. Catlett, after this preliminary report was made, you made another report, did you?

A. Yes, sir; which is set forth in the statement which has been submitted.

Q. I want to understand you. You made another report

after this, and of that other report Defendant's Exhibit No. 100 is a summary?

A. Yes, sir.

Q. Have you a copy of that other report?

A. No, sir; not with me. I think I have it in my papers at home.

Q. Did you furnish a copy of it to Mr. Gayley?

A. At that time?

Q. Yes.

A. Yes.

Q. Did you ever get it back?

A. No, sir. I think I have retained a copy of it in my own files, but I do not have it with me.

Q. So far as you know, it is in the possession of either the Tennessee Coal, Iron & Railroad Company or the United States Steel Corporation?

A. So far as I know, sir.

Q. You came to the conclusion there that the operation of these furnaces, as shown in those reports of September, was costly and inefficient?

A. Yes, sir.

Q. Was that on account of the character of the ores or the manner in which they were handled?

A. Mainly on account of the manner in which they were handled.

Q. Well, those were things which could be bettered?

A. Yes, sir; I believed that the practice could be very much bettered.

Q. Did you recommend any changes in the way of procedure?

A. In a general way I recommended that the character of the coke be improved, which could be done under the methods which they were then pursuing, and I also recommended the installation of by-product coke ovens.

Q. Do you know whether or not the methods have been improved and the results have been much better?

A. I understand that they have.

Q. You made no examination into costs prior to September, 1907?

A. No, sir.

Q. Who was operating it in September, 1907? Had the Steel Corporation taken it over then or not?

A. No, sir.

Q. It had not?

A. No, sir.

Q. That was the old management?

A. Yes, sir.

Q. When did you first go there in 1907 representing the Steel Corporation?

A. It was early in November, and somewhere between the 1st and the 7th, as I recollect it.

Q. Had you ever been there before that?

A. I had been in the district before that; yes, sir.

Q. Well, had you made any report to the Steel Corporation or made any representations to them before that, in regard to those properties?

A. I had made no definite representations, because I had no exact information.

Q. Well, did you make any kind, and if so, to whom?

A. Not to the Steel Corporation. In 1896 I had some negotiations with Mr. Carnegie about some southern properties, and I suggested to him then that he might buy the Tennessee Coal & Iron Company, which had the reputation of being a large and valuable property.

Q. Well, I mean in 1907, before you went there in November, did you make any representations to them?

A. No, sir; I made no representations, and had no requests for information.

Q. After you went there and examined the territory, you made some recommendations as to purchasing other properties; you recommended the purchase of other large operating companies in that district, I believe you said?

A. I did, but I should more properly have said that I recommended the consideration of the purchase. I did not have such detailed information in regard to those other properties as to specifically recommend their purchase.

Q. Oh, I do not mean to suggest that you recommended any such thing as terms or gave any report upon them.

A. No.

Q. But you did recommend their taking up the question of purchasing them?

A. Yes, sir.

Q. These companies that you recommended the purchase of, what were they making?

A. The Sloss-Sheffield Company was making pig iron only; the Birmingham Coal & Iron Company had been making pig iron, and was at that time in the hands of a receiver; the Woodward Iron Company was only making pig iron.

Q. The Tennessee Company was a large producer of iron ore?

A. Yes, sir.

Q. And all of these companies were competitors, were they not, of the Tennessee Company?

A. Yes, sir.

Q. Where were they selling generally their products—these various companies?

A. The bulk of the product of all these companies was going north of the Ohio River.

Q. And you say that, to your astonishment, they did not show the slightest interest in your recommendation to buy up, within these districts, these competitors of theirs in interstate commerce?

A. Yes, sir.

Q. Do you not know, as a matter of general knowledge and information, that about that time there was a good deal being said about the Steel Corporation having taken over the Tennessee Coal, Iron & Railroad Company?

A. Yes, sir.

Q. There was a good deal said in the papers about it, was there not?

A. Yes, sir.

MR. REED: That is objected to as hearsay.

By MR. DICKINSON:

Q. The taking over of the Tennessee Company was at that time being criticised, was it not?

A. It was being discussed a great deal.

Q. Was it not being discussed from the standpoint of public policy?

A. Yes, sir; but there were discussions on both sides of the proposition.

Q. But I am just saying there was a discussion involving that question?

A. Yes.

Q. At that time?

A. Yes.

Q. Next to the Tennessee Company, which company had, in volume and richness, the largest amount of ores in that district?

A. I am not prepared to say.

Q. I will ask you if it was not the Woodward Company?

A. I cannot say, from my own knowledge, nor from a strong opinion.

Q. I will ask if the Woodward Company was not credited at that time with having a large amount of very valuable ore in the Birmingham district?

A. Yes, sir.

Q. And this was one of the companies you recommended the purchase of?

A. Yes, sir.

Q. Mr. Catlett, you were asked about brown ore reserves of the northern Alabama and eastern Tennessee districts. Did you understand that expression, "eastern Tennessee," and, in answering it, did you use it in the sense that it is used there where the grand divisions of the state are spoken of as east, middle and west Tennessee?

A. No, sir.

Q. You had no reference to that?

A. No, sir.

Q. And as to whether these were in what is geographically there known as middle or east Tennessee you are not undertaking to say?

A. No, sir.

Q. When you spoke of a number of furnaces in east Tennessee that were running on brown ores, you mentioned the

Mannie furnaces at Allen's Creek, and no others. What others did you have in mind?

A. I do not recall the names of them. There were one or two other small furnaces in that section of Tennessee when I was last there, in operation; small furnaces only.

Q. They were very small, were they not?

A. Yes.

Q. Probably not over 60 tons each, were they?

A. I should say that they would run nearer 75 or 80 tons. They were small furnaces.

Q. When you were at Mannie, were there one or two furnaces in operation?

A. Two furnaces were in operation when I was there.

Q. What year was that?

A. I am not certain.

Q. I am not particular about it, but do you know whether there are any furnaces in that section operating now or have been within the last year?

A. No, sir.

MR. REED: You do not know, or you know there are not?

THE WITNESS: I simply do not know.

By MR. DICKINSON:

Q. That is the way I understood him.

You made no estimate based upon actual figures of operation that had taken place in regard to the cost of taking out the Texas ores?

A. No, sir.

Q. You state there that the average thickness of the bed in Cass County, covering an area of something like fifty miles, would be about two feet, as I understood you. Is that what you intended to say?

A. Yes, sir. It would correspond to what would be a solid bed of something less than two feet in thickness.

Q. How did those variations run? Do you know? Was it pretty uniform at two feet, or were there large areas where it was very much less and large areas where it was very much more? What I am trying to get at is what were the extremes,

and to what extent they prevailed, if you can give me an idea.

A. There were sections there where I was satisfied it would not be workable; but in the portions which I considered as workable, the average would run about as I have stated.

Q. What did you consider as workable? What would be the minimum?

A. It would vary at each point and on each property, depending upon the relation of the ore to the surface and its relation with the overburden. At points even six inches of ore could be satisfactorily operated, if it were lying directly on the surface. At other points four or five feet might be the limit of economic working, on account of the amount of stripping and the amount of waste that would go with it.

Q. That varied very much in different places?

A. Yes, sir.

Q. And there was very much of this territory that you considered non-workable?

A. Yes, sir.

Q. Did you make any figures or estimates as to the percentage either way?

A. No, sir.

Q. Could you give that now? I mean, such as would be worthy of a scientific opinion?

A. In a general way I would say that from five to ten per cent. of the territory over which I went would carry workable ore.

Q. And you examined various parts of about 50,000 acres?

A. Thirty to thirty-two thousand acres.

Q. Yes, in Cass County?

A. In Cass County, and it may have gone on the edge of Upshur and the edge of Marion. They were not connected tracts.

Q. Then these ore lands were not one continuous body?

A. The ownership did not comprise one continuous body.

Q. But the ore-bearing lands were?

A. Yes.

Q. You went there for the purpose, I believe, of advising the railroad company as to the extension of the railroad?

A. Yes.

Q. That involved a contemplated outlay of considerable capital?

A. Yes.

Q. And you made such a careful examination as you felt justified you in advising them one way or the other about that?

A. Yes.

Q. You stated that you estimated that this ore could be delivered in Philadelphia on a certain basis. What were your data for making that estimate; what personal knowledge did it involve, and how far was it based on your ideas of what might prevail?

A. The cost of mining was entirely a matter of opinion; the question of the transportation and the cost was information secured from railroad offices, as to the rate which I understood was then in force.

Q. What rate was that?

A. That rate was one dollar per ton. My information as to water transportation was based primarily on a letter from the Mallory Steamship Company offering to take such ore to Philadelphia for $1.22.

Q. When was that letter written?

A. I do not know, sir; previous to my visit there.

Q. How long previous to your visit?

A. I do not know.

Q. Do you know whom it was written by?

A. No, sir.

Q. To whom was it written?

A. It was written to Mr. Wesley Merritt, who was then Industrial Commissioner of the Atchison Railroad.

Q. Do you know the writer?

A. No, sir.

Q. Do you know his signature?

A. No, sir.

Q. Did you know anything about the genuineness or authenticity of the letter or the purposes for which it was written of your own knowledge?

A. Nothing except what is shown on the face of the letter.

MR. DICKINSON: That is all.

RE-DIRECT EXAMINATION

By MR. REED:

Q. Mr. Catlett, Judge Dickinson brought out some recommendation that you made to Mr. Carnegie, but he stopped there without asking you what the occurrence was. What did you recommend to Mr. Carnegie in 1896?

A. I at that time was negotiating with Mr. Carnegie in regard to some southern properties, and he seemed to be interested himself, and I suggested to him to consider the purchase of the Tennessee Coal, Iron & Railroad Company. Mr. Carnegie replied——

MR. DICKINSON: I object to Mr. Carnegie's reply.

MR. REED: Go ahead, please, Mr. Catlett.

THE WITNESS: (Continuing) Mr. Carnegie replied that he "would have nothing to do with that football of speculation."

By MR. REED:

Q. Did the matter drop there?

A. The matter dropped.

Q. I notice also that in your cross examination you were asked to contrast the tonnages of the Sloss Company and the T. C. I. in the Birmingham district. Where do the bulk of the Sloss ore properties lie?

A. The Sloss Company estimates that their principal holdings are in the Russellville district, of brown ore.

Q. That is outside of the Birmingham district?

A. Of the immediate Birmingham district.

Q. In 1907 what tonnage of ore did the Sloss Company claim?

MR. DICKINSON: I object to what they claimed as hearsay and incompetent.

THE WITNESS: The statement made in their report at that time was something over 600,000,000 tons.

MR. DICKINSON: I object to that as incompetent, hearsay and secondary.

(Here a paper was marked "Defendants' Exhibit No. 115.")

By MR. REED:

Q. I show you Defendants' Exhibit No. 115 and ask you what that is.

A. That is a report of the Sloss-Sheffield Steel & Iron Company for 1907, which I got during my examinations in Alabama at that time and have retained in my files since.

MR. REED: There is no objection to leaving that with us for the time being?

THE WITNESS: No.

MR. DICKINSON: Have you offered that?

MR. REED: I have not yet.

THE WITNESS: I would like to get back a copy of the letter which has been put in evidence.

MR. REED: I think it will be consented to by counsel for the Government that both of these exhibits may be returned to you after they are copied in the record.

MR. DICKINSON: Certainly.

By MR. REED:

Q. I notice in this letter, Exhibit 440, that the depth of the ore under Shade's Valley is estimated at about 8,000 feet, and that your calculations as to its workability are affected by that estimate. Do you know what subsequent drillings have shown as to the depth of that ore?

A. The statements in that letter were based upon the assumption that the dip of the ore would continue as it showed up at the surface, and since then my understanding is that the additional diamond drill work which we recommended at that time has shown a change in the dip which has brought the ore very much nearer to the surface.

MR. DICKINSON: We object to that as hearsay.

By MR. REED:

Q. In other words, your assumption has been proven to be incorrect?

MR. DICKINSON: I object to that, as he has not said that it has been proven to be incorrect; he said that some reports to him about diamond drills showed it.

THE WITNESS: Yes.

By MR. REED:

Q. Which company had the best ore in the Birmingham district in 1907?

A. The general knowledge of the district was that the Woodward Company had the best ore.

Q. Which company had the next best ore to the Woodward?

A. I do not recall any definite idea as to the other properties. It was generally conceded among furnace men that the Woodward had the better grade ore.

Q. Is that still the case?

A. I do not know.

RE-CROSS EXAMINATION

By MR. DICKINSON:

Q. What is the difference between the Woodward ore and the Tennessee Company's ore?

A. I have no personal knowledge of that, but my understanding is that it was somewhat purer than the ore on either side of it.

Q. Were the workings of the Woodward of that character, that you say was reported to be superior, small in comparison with the entire body of ore owned by the Tennessee Company from Grace's Gap to Sparks Gap?

A. I have made no estimate of the Woodward holdings, but I would expect that the holdings of the Woodward Company would be small in comparison with the tonnage of the other companies I have named.

By MR. REED:

Q. With what other companies?

A. In the territory between Spark's Gap and Grace's Gap.

Q. Of all owners?

A. Of all owners.

Q. And of all grades of ore?

A. That is what I intended to say.

By Mr. Dickinson:

Q. Of the higher grade of ores from Spark's Gap to Grace's Gap, don't you know that the Tennessee Company was credited with holding by far the larger portion?

A. I do not know that they did of the tonnage, but they did on the outcrop; the outcrop itself was greater than the others.

Q. You mean the outcrop along Red Mountain?

A. Yes.

Mr. Dickinson: That is all.

Mr. Reed: Mr. Birkinbine.

JOHN BIRKINBINE

was called as a witness on behalf of the defendants, and being first duly sworn, testified as follows:

DIRECT EXAMINATION

By Mr. Reed:

Q. Mr. Birkinbine, where do you live?

A. I live at Cynwyd, a suburb of Philadelphia.

Q. What is your age, Mr. Birkinbine?

A. Sixty-eight.

Q. What is your occupation?

A. I am a consulting engineer.

Q. And where are you engaged in business?

A. My office is in Philadelphia, in the Parkway Building.

Q. As consulting engineer, have you specialized in any particular branch of engineering?

A. One of the specialties of my office is iron ores and iron metallurgy.

Q. How long have you specialized in iron ores?

A. About forty years.

Q. Have you any personal acquaintance with the different iron ore deposits of the United States?

A. I have visited a great many of them, in some twenty-five or twenty-six states.

Q. You mean that you personally have examined deposits in as many as twenty-five or twenty-six states?

A. I have; also in Mexico and Canada.

Q. Have you made any reports on these deposits which you examined?

A. Quite a number of them.

Q. Have you acted for different iron ore companies as an expert or specialist?

A. Iron ore companies and iron manufacturing companies also.

Q. Steel companies?

A. Yes.

Q. How long have you been acting as a consulting expert or specialist for such companies?

A. I have no special time that I have acted. Most of my work is temporary. I am called upon to investigate a property, and the engagement ceases.

Q. And over what period of time, Mr. Birkinbine, does such occupation extend? I mean, how long have you been engaged in that class of practice?

A. Oh, I have been engaged in that practice practically all the time since I have made a specialty of iron ore work.

Q. Have you made any special studies of the resources of iron ore of this country?

A. That has been what I might designate as a fad, for my office to keep up with the iron ore development and resources.

Q. Have you ever done any work for any department of the Government on iron ores?

A. I was called upon in, I think, about 1886, to write a monograph for the United States Geological Survey on the iron ores east of the Mississippi River—I think that was the title—and my impression is I also contributed some data prior to 1889, when I undertook the collection of the iron ore statistics of the country, which had never been assembled, and continued that for some seventeen years.

Q. In what form were those statistics published?

A. They were published as monographs of the United States Geological Survey.

Q. Under the title of "Iron ore, pig iron and steel," is that it?

A. No, the monographs that I was responsible for were entirely on iron ore.

Q. Oh, yes.

A. Others made monographs on precious metals and on other metals.

Q. Were those published annually by the Geological Survey?

A. Published annually, yes.

Q. How long did you continue to do that, Mr. Birkinbine?

A. I did that until 1905 or 1906, and during that interval I also collected statistics for the two censuses, 1890 and 1900.

Q. That is the eleventh and twelfth censuses, as they were known?

A. I think that is so.

Q. What was your title when you were with the Geological Survey?

A. My title was a special agent.

Q. Did you give up your Philadelphia office and your general practice?

A. Oh, no. The Government merely offered an honorarium for that service, which really did not pay for the clerical help.

Q. It was not very profitable then, was it?

A. No, but it was very interesting.

Q. Have you served in any other positions for the Federal Government? Have you acted in any of its——

A. (Interposing) I prepared two maps, one while I was acting as special agent, and one by request after I had given up that work, showing the distribution of Lake Superior iron ores. I think that is all the government work I have done.

Q. Will you tell us some of the companies for which you have acted as consulting mining engineer?

A. I have never had that absolute title with any company. I have been called in in consultation, and very often it has gone into other fields. I was connected with the Colorado Fuel & Iron Company for a number of years, and a large part of my work was outside of the mere mining; it was the

designing of the plant and getting its water supply as well as its fuel supply.

Q. Have you acted for any other companies?

A. Yes; I was also acting in a consulting capacity, particularly as to its supply of water, for the Cambria Steel Company at Johnstown, and I have at times served quite a number of the larger companies.

Q. Have you done work for any Mexican companies?

A. Yes, I have done considerable work in Mexico.

Q. For what companies?

A. My first investigation in Mexico was to examine the Cerro de Mercavo for Mr. Jay Cook. That was in advance of the railroads.

Q. Any other Mexican companies?

A. I also investigated iron ore properties in Mexico, in the states of Oaxaca, Puebla, Hidalgo, Nuevo Leon, and, I think, Coahuila.

Q. Have you done similar work for any Canadian companies?

A. I have examined properties in Quebec and Ontario, I think.

Q. Have you done any work for any mining companies in the Adirondack region?

A. I was connected with Witherbee-Sherman for probably three years, during which we investigated the problem of concentrating. I was also connected, simultaneously, with Mr. Edison in his concentration experiments.

Q. Mr. Thomas A. Edison?

A. Yes, sir.

Q. He made a number of experiments in metallic concentration, did he not?

A. Yes.

Q. Have you had any experience in the Lake district, Mr. Birkinbine?

A. I have been familiar with the Lake Superior district. That is what you mean?

Q. Yes.

A. For over thirty years.

Q. Did you ever report on any of the mines there?

A. I have made reports on some of the mines there.

Q. Did you ever do any work on the Gogebic range?

A. I was on the Gogebic range when it was little more than a prospect at first, and then subsequently I investigated for some of the parties the whole Gogebic range as it was then understood, about 1885 or 1886.

Q. Mr. Birkinbine, you had some office in the American Institute of Mining Engineers, I believe. What was it and when was it?

A. It is over twenty years ago that I was president, for two years. I do not recall the exact dates.

Q. Have you any connection with the Franklin Institute?

A. I was president of that for ten years.

Q. And the Engineers' Club of Philadelphia?

A. I was president of that also.

Q. Have you any financial interest in the United States Steel Corporation?

A. Not a dollar.

Q. Have you any in any other iron or steel manufacturing company?

A. I have stock in a machine company.

Q. Has that anything to do with the Steel Corporation?

A. No; but that is a manufacturing property, which is what I understood you to ask; and I own some stock in the Boyertown Ore Company, which was given to me for services in making a report upon it.

Q. The Boyertown Ore Company?

A. Yes.

Q. Where is that?

A. Near Pottstown, Pennsylvania.

Q. That has nothing to do with the Steel Corporation, has it, as far as you know?

A. No. I think it is a good property, though, or will be.

Q. Is that Pennsylvania ores?

A. That is a property which produced the first iron ore used in Pennsylvania, away back in 1730 or something of that kind.

Q. Are you familiar with the Pennsylvania iron ores?

A. I am familiar with the iron ores of Pennsylvania; yes, sir.

Q. Is there any iron ore in eastern Pennsylvania and central Pennsylvania?

A. In central Pennsylvania the Cornwall Hills has been producing magnetic iron ore since 1740, and is still producing probably about half a million tons a year, with every prospect of continued life, if you may judge by the expenditures the owners are making toward the future.

Q. Where does the ore from that mine go?

A. It is entirely used by the owners of the property.

Q. Who are they?

A. They are the Pennsylvania Steel Company and the Lackawanna Steel Company; I would say, with the exception of a right which is held by the Robesonia Furnace Company.

Q. How far does this ore have to be carried to get to the Pennsylvania Company's blast furnaces at Steelton?

A. Well, it is not used at Steelton. It is used within six miles, at Lebanon. There may be some of it that goes to Steelton, but as a rule it is used at Lebanon.

Q. Where are the Lakawanna Company's furnaces?

A. Those are at Buffalo now, and also close to the mine, near Cornwall.

Q. Is some of this ore taken from Cornwall to Buffalo?

A. Oh, no.

Q. It is all used in the local furnaces of the Lakawanna?

A. It is all used in the local furnaces.

Q. Does that mine exhibit any indications of exhaustion?

A. Not nearly as much as it was supposed to show twenty years ago.

Q. Are there other ores than those in this Cornwall mine in Pennsylvania?

A. There are other ores. There are indications which have been developed into exposures at a number of points along the south mountain of the same magnetic ore. At Boyertown is one of them, and French Creek another, and at Albertus another. Then they swing south into the Dillsburg district. Then, in addition, nearly paralleling that in the valleys, are deposits of brown hematite, extending in a south-

easterly direction through the state. There are fossil ores along the north mountain; that is, the Allegheny, carbonate ores, and some derivatives of the carbonates, brown hematites.

Q. Mr. Birkinbine, in the course of your work for the Geological Survey and for the Census of 1890 and that of 1900, did you have occasion to receive reports from different mining properties?

A. I received reports from every active mine and from all of the inactive mines that I could possibly get in communication with.

Q. In what districts?

A. All over the country. Those reports are made on regular blanks which the Government supplied.

Q. Do you feel that you have a fairly complete knowledge of the iron mines of the United States?

A. Up to the time of my giving up that work I thought I had as full knowledge of the iron ores of the country as anybody possessed.

Q. Mr. Birkinbine, in your opinion would any new steel company organized now to use, say a million and a half tons of iron ore yearly, have any difficulty in securing an adequate supply of high grade ore for use in its furnaces, if those furnaces were located say in Illinois, Indiana, Ohio or in Pennsylvania or New York?

MR. DICKINSON: This is objected to on the ground that the witness has not shown that he is qualified to express an opinion on the subject.

THE WITNESS: I do not anticipate that there would be difficulty in supplying an iron or steel industry such as indicated. In fact I believe the development of our iron and steel industry will not be retarded by the supply of iron ore.

By MR. REED:

Q. What will retard it, if the ore supply does not? In other words, what influence will have a retarding effect instead of the shortage of iron ore?

A. The demand for the product would primarily affect the decision as to the erection of the blast furnace; the rela-

tion of labor will probably have as much influence, if not more, on the product, than the quantity of iron ore.

Q. In your opinion is there enough high grade ore to supply more than one of such new concerns as I have described?

MR. DICKINSON: That is objected to on the ground that the grades of the ore are not specified in the question, and on the further ground that the witness has not shown himself qualified to give an expert opinion on that subject.

(The question was repeated by the stenographer.)

THE WITNESS: I believe there is, and I can only repeat what I have said, that I do not believe the iron ore supply will restrict the iron and steel industry of the country.

By MR. REED:

Q. In your opinion is a monopoly of the high grade ore, that is, ore of the present standard of availability of this country, possible?

MR. DICKINSON: This is objected to on the ground that the question does not indicate what is meant by the term "monopoly," and on the further ground that the witness has not shown himself qualified to express an expert opinion on that subject.

THE WITNESS: If you mean by monopoly the absolute control of the iron ores of the country, I certainly would say no. If you mean that a practical monopoly is possible or practicable I would also say no.

MR. DICKINSON: This is objected to on the ground that it has not been shown what the witness means by the term "practical monopoly."

MR. REED: You may cross examine.

CROSS EXAMINATION

By MR. COLTON:

Q. Mr. Birkinbine, in 1905 were you connected with the United States Geological Survey in any way?

A. I think that was the last year in which I was connected with it as special agent.

Q. At that time you made a report concerning the iron

ore industry of the various states during 1905, and concerning Minnesota you said:

"As in the year 1904 this State stands preeminent as a producer of iron ore, the 21,735,182 tons mined in 1905 being slightly more than one-half of the total for the United States."

Is that your recollection of the production of the State of Minnesota for 1905?

A. If it is in that report it is what I understood and believed at that time.

Q. Well, is that not about the quantity?

A. I would say it is, but I do not recall the exact figures.

MR. REED: Is that report in evidence, Mr. Colton?

MR. COLTON: I do not know whether it is or not.

MR. REED: You have not offered it?

MR. COLTON: I do not remember; I am not positive whether the entire report was offered in evidence or not.

By MR. COLTON:

Q. It continues—I am reading from what it purports to be, and I will show it to you—

"This is an increase over the 1904 production, 12,728,835 tons, by 9,006,347 tons, or 71 per cent., being the maximum output for the state, and a larger quantity than was mined in the whole of the United States in any other one year prior to 1899. This is also larger than the output of the entire German Empire, including Luxembourg, in the year 1904, but it is probable that contemporaneous figures will show that the latter may slightly surpass the tonnage of this state in 1905."

Is that your recollection of the relative importance of the State of Minnesota in the year 1905?

A. It is.

Q. At that time, in 1905, the State of Michigan was producing about 23 or 24 per cent. of the total production of the United States, was it not, Mr. Birkinbine?

A. I do not recall those exact figures or percentages, but I am very willing to say that my recollection is that when I wrote that, it was the year that Minnesota had outstripped

Michigan; I think it was the first year, and I made the full statement and gave to Minnesota the credit which I believed it was entitled to, and then drew those comparisons with foreign countries.

Q. And in the year 1905 the Lake Superior district as a whole at that time was producing about 78 per cent?

A. I do not recall that.

MR. REED: Of what, Mr. Colton?

MR. COLTON: Of the total production of the United States.

THE WITNESS: I think those figures are all given in that report.

By MR. COLTON:

Q. I call your attention to a statement purporting to be written by you, and ask you whether or not Minnesota did not produce in the year 1905 about 78 per cent. of the total production of the whole of the United States—the Lake Superior district.

MR. REED: Are you not going to have that marked as an exhibit?

MR. COLTON: No; I am simply cross examining the witness and reading him a statement from the report.

MR. REED: I object to the use in cross examination of the witness of any document which is not marked as an exhibit.

MR. DICKINSON: He can use it to refresh his memory.

MR. REED: (Continuing) Or not identified for the use of the Court and counsel.

MR. COLTON: It is already identified as Government Exhibit No. 368.

By MR. COLTON:

Q. I show you page 10 of Government Exhibit No. 368, for identification, which contains the following: "The maximum annual production of the Lake Superior region was, in the year 1905, when 33,325,018 long tons were mined, or 78 per cent. of the total for the whole of the United States." Is that correct?

A. To the best of my knowledge and belief, it is correct, and was when I wrote it.

Q. (Reading) "The Mesabi range was the largest con-

tributor in the Lake Superior region, with 20,156,566 long tons, or 60.5 per cent. of the total."

A. As near as I can recall, that is correct.

Q. Now, comparing the production of the Lake Superior region in 1905 with the production of the Lake Superior region for the year 1912, is it not a fact that the Lake Superior region was producing a larger proportion of the total tonnage produced in the United States in 1912 than it was in 1905?

A. I have not the figures before me. I cannot answer that.

Q. I ask you as a man supposed to be familiar with the statistics on this subject, if you do not know as a matter of fact that the Lake Superior district in 1912 produced approximately 84 per cent. of the total production in the United States?

A. No, I do not. I know that the production in the United States was about 55,000,000 tons. Now, just what Lake Superior produced in the same year I do not recall at the present time.

Q. Do you not even know it was over 75 per cent?

A. I presume it was.

Q. Do you not know it was over 80 per cent?

A. No, I do not, without making the calculation. If you will give me the figures, I will make the calculation in a moment. I should not be surprised that it was.

Q. Now, as to the state of Minnesota, do you not know that the State of Minnesota produced approximately 62 per cent. of the total production of the United States in 1912?

A. No, but it approximates what I believe would be the conditions. I have not looked at that report for some months or more. In fact, I have not read it very carefully at all this year.

Q. The Lake Superior district was, in 1905, the most prominent iron producing district in the world, was it not?

A. It was.

Q. In 1901 it was the most prominent iron producing district in the world, was it not?

MR. REED: By "prominent" do you mean largest?

MR. COLTON: The largest producer, yes.

THE WITNESS: It was a very important producer, but I cannot recall the relative figures.

By MR. COLTON:

Q. It was by far the most important producer in the United States, was it not?

A. It has been for years. In the seventeen years that I collected data, my recollection is the production of the United States increased three-fold.

Q. Mr. Birkinbine, from 1901 down to October 26, 1911, has not the Lake Superior district been the basis of the steel industry of this country?

A. Certainly; but not the sole reliance.

Q. The cheaper mining costs in the Mesabi range enabled the State of Minnesota to outstrip the State of Michigan, where the older ranges are for the most part located, did it not, Mr. Birkinbine?

A. If you consider the mining costs alone, yes; but they are not the only factors entering into ore delivery.

Q. Well, what other factors enabled the State of Minnesota to outstrip the State of Michigan in the production of iron ore?

A. Well, the factors that have enabled the State of Minnesota to outstrip Michigan and other states in a life—in an interval of thirty years from the time it was not a producer of iron ore at all, have been, first, that so far as the Mesabi range, which has been the big factor in quantity, is concerned, the deposit is easily determined, lays practically, you might say, as a blanket, and has been exploited by steam shovel, so as to give you a large output; but the items, besides the cheaper mining, that enter into the cost of those ores, are the expense of getting rid of the over-burden, where it exists —I am speaking of mining now—taking the ore out—the transportation to points of consumption, which are distant in almost every case, and the royalties to be paid. In addition to that, there has been a drawback on account of the physical condition of the ores.

Q. A drawback on the Mesabi ore, which is represented in the price bearing a differential over old ranges from about 25 cents in 1912 to 75 cents or more for other years?

A. Well, I do not recall the exact figures, but that differential exists, and your statement, I would think, is practically correct.

Q. It has varied for different years?

A. Yes.

Q. And on the whole, the differential has diminished between the old ranges and the Mesabi, has it not?

A. It has.

Q. Do you know as to what is the approximate quantity of ore averaging as high as 61 per cent. iron in the Lake Superior district?

A. I do not recall it, no; but I am certain the average of the ore from the Lake Superior district as shipped will not yield 61 per cent.

Q. You did not have in mind the question of a company's getting control of ore over and above 61 per cent., did you?

A. Not at all.

Q. You could not express an opinion as to whether it would be possible for a single company to get practical control of ore averaging over 61 per cent. in the Mesabi?

A. I did not consider any 61 per cent. ore. Why should I, when the average ore used is only 52?

Q. I did not ask you why you should. I asked you whether you did or not.

A. I did not.

Q. Did you have in mind a company's getting possession of ore over 58 per cent. in the Lake Superior district?

A. I did not refer to the Lake Superior district.

Q. I am now speaking of the Lake Superior district. You had the Lake Superior district in mind, did you not?

A. Partly, yes.

Q. You do not undertake to say that a company could not get control of nine-tenths of all the ore ranging over 58 per cent. in the State of Minnesota, do you?

A. You give me two negatives there. I do not know just how to answer.

(By request, the stenographer repeated the question.)

Q. You may make any explanation you like. I think the question is clear.

A. I did not make any statement of that kind.

Q. Will you answer the question, please?

MR. REED: He has. He has answered exactly what you asked him.

By MR. COLTON:

Q. Could you make any statement to that effect, based on knowledge?

A. Not without investigating the details of various mining propositions, I could not.

Q. You are not sufficiently familiar with the Lake Superior district to give an opinion on that subject, are you?

A. I am not at the present moment, to express an opinion on a specific grade of ore in a specific quantity.

Q. What have you had to do with mining costs?

A. I have had a good deal to do with mining costs.

Q. Have you had to do with the operation of any mines in the Lake Superior district?

A. Not in the Lake Superior district, but in Pennsylvania; brown hematite mines in the Cumberland Valley.

Q. You have lived to see the State of Pennsylvania fall from one of the largest producers of iron ore to among the smaller, have you not?

A. No, sir; I have lived to see the State of Pennsylvania remain nearly stationary, while the other States have gone far beyond it.

Q. It has fallen relatively?

A. Relatively it is much below what it was.

Q. Did it not start about first, and fall down to toward the bottom of the list of iron producing States?

A. Pennsylvania was the iron producing State of the country, and is to-day; but it was largely dependent in its earlier days on local ores, many of which are now lying dormant, and the ores from Minnesota and elsewhere are coming into the State furnaces.

MR. COLTON: That is all.

MR. REED: I have no further questions, Mr. Birkinbine.

(The witness was thereupon excused.)

MR. REED: The Defendants offer in evidence the title page of Monograph 52 of the United States Geological Survey, entitled "The Geology of the Lake Superior Region, by Charles Richard Van Hise and Charles Kenneth Leith, Washington, Government Printing Office, 1911;" and offer also that part of said monograph which commences with the words "Reserves available for the future," on page 491 thereof, and ends with the words "the amounts available are larger" at the end of the first paragraph of the text on page 493, being the fourth line from the bottom of the page.

MR. DICKINSON: This is objected to, first on the ground that it is only an excerpt of a portion of the subject dealing with reserve ore available in the Lake Superior region and leaves out the following portion, beginning on page 489, headed:

"RESERVES OF ORE AT PRESENT AVAILABLE.

ESTIMATES.

The authors have made no independent detailed estimates of Lake Superior iron-ore reserves for this monograph. They have, however, had access to the detailed estimates of the principal mining companies and to the records of the Minnesota Tax Commission and are from their field study familiar with most of the large deposits or groups of deposits. The estimates here given represent their judgment as to the approximate tonnage of ore now available, based on the above information. The variations in the independent estimates of mining companies and the difference of opinion as to how low a grade of ore in any given place is to be included in the available ores give latitude for considerable variations in estimates. The authors can claim no finality for the figures published. They are what seem to them reasonable approximations.

ESTIMATES OF THE AVAILABLE PRE-CAMBRIAN IRON ORE OF THE LAKE SUPERIOR REGION:

	Long tons
Marquette district	100,000,000
Gogebic district	60,000,000
Menominee and Crystal Falls districts	75,000,000
Mesabi district	1,600,000,000
Vermillion district	30,000,000
Cuyuna district	40,000,000
	1,905,000,000

The reserve reported includes about 130,000,000 tons of washable ores from the western Mesabi, averaging 46 per cent. of iron (dry) of non-Bessemer character. Of the remainder of Mesabi ores, approximately 40 per cent. are Bessemer.

There is a further low-grade reserve in the Clinton ores of Wisconsin which may be of considerable magnitude. (See pp. 566-567.)

LIFE OF ORE RESERVES AT PRESENT AVAILABLE.

Figure 73, prepared by H. M. Roberts, shows the total production of ore from the Lake Superior region for 30 years before 1907 and the rate of increase of production. To the close of 1910 20.5 per cent. of the known reserves had been consumed. If the above estimates of

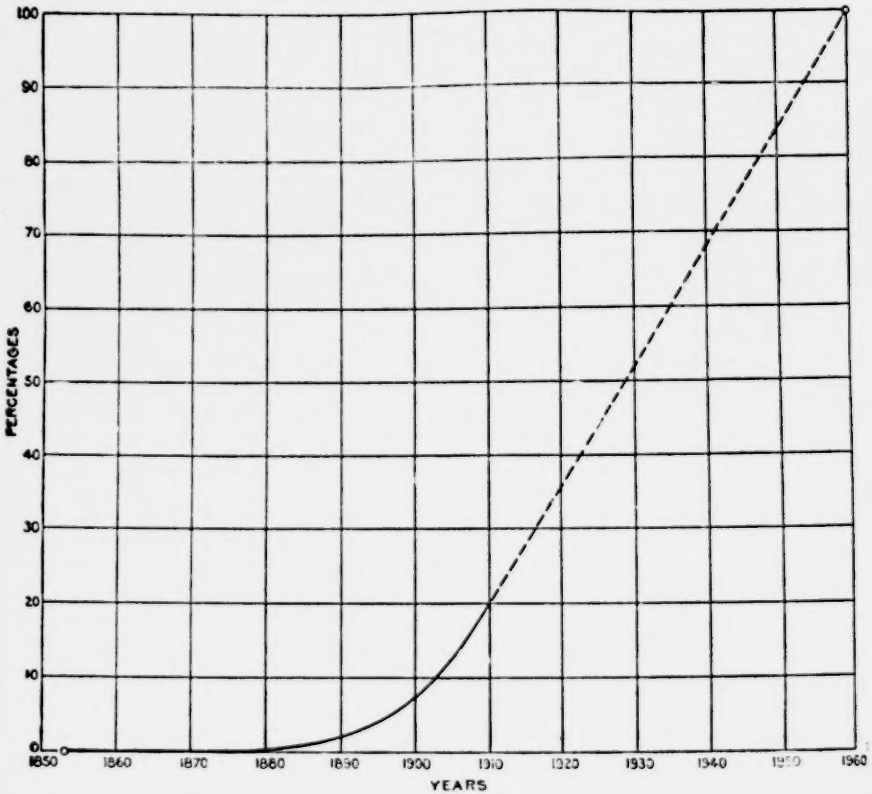

FIGURE 73.—Diagram showing relation between estimated ore reserves of the Lake Superior region and rate of production. The estimated reserve, 1,905,000,000 tons plus the total amount of ore mined to the end of 1910, is represented as 100 per cent. on the vertical line. For each year there is shown the percentage of this total which had been removed to the end of that year. For example, 15.9 per cent. of the known ore was removed to the close of 1907. For the last five years, 1905 to 1910, the curve is practically a straight line. If this line is projected at a uniform slope, it indicates complete exhaustion of the known reserves in 1960. Reasons are given in the text, however, for the belief that the date of exhaustion will be later.

reserves at present available are even approximately correct and the rate of production remains the same as that in 1910, the life of the ore deposits as now estimated will be 45 years —that is, to 1956. If the rate of production increases in the future this time will obviously be shorter. As some increase in the rate of production seems likely in spite of the probable temporary recessions due to business depressions, if only high-grade ores are mined the exhaustion of the existing deposits, or, if not these, of the amount of high-grade ore equivalent to that now in sight, will probably occur earlier than this date. But even this conclusion must be modified by the fact that in proportion as the inadequate supply of high-grade ores becomes depleted, there will be an increased use of lower-grade ores with the high-grade material, whose life will be thereby prolonged. This factor is regarded as so important as to render it probable that the use of the high-grade ores will be distributed through a much longer period than 45 years, just as there will be first growth white pine remaining uncut long after the date when all the white pine would be gone at the present rate of use. Also new discoveries of ore of present commercial grade are made yearly. Prior to 1911 the discoveries have kept well ahead of the shipments. The region is now so well known that there is little likelihood of discovering another Mesabi range. Though it is not impossible that in the next few years the reserves may be sufficiently increased by discovery to keep pace with the shipments, this is rather unlikely. Still less likely is it that the increase of reserves will keep pace with an acceleration of production. If, for instance, the increase of production for a year amounts to 2,000,000 tons, and it is estimated that the present reserves will last 20 years at the lower rate, it will be necessary in that year of increase to discover 40,000,000 tons of ore in order that the life of the reserves may not be lessened."

Second, it is objected to on the ground that it is not Government statistics, but a mere expression of the opinions of the authors, who state on page 489 of the same volume: "The authors have made no independent detailed estimates of Lake Superior iron ore reserves for this monograph," and who also state at page 30, in the introduction, as follows:

"Finally, mining, drilling, and various public and private surveys are so rapidly extending the knowledge of the geology of the region that it is practically impossible at the present time to write a monograph that will not require modification in some particulars almost before it comes from the press. Because of these facts this work shows inequalities and inadequacies of treatment for different parts of the region and for different phases of the subject."

(The portions of the volume referred to were thereupon marked "Defendants' Exhibit (Birkinbine) No. 116, October 16, 1913," and will be found in the volume of exhibits.)

MR. REED: We offer in evidence Defendants' Exhibit 115, being the eighth annual report of the Sloss-Sheffield Steel & Iron Company for the fiscal year ending November 30, 1907.

MR. DICKINSON: This is objected to on the ground that it is irrelevant, and on the further ground that it is simply a printed paper purporting to be a report, and which has not in any way been proven as authentic.

(The paper referred to was thereupon marked "Defendants' Exhibit (Catlett) No. 115, October 16, 1913," and will be found in the volume of exhibits.)

(Whereupon an adjournment was taken until tomorrow, Friday, October 17, 1913, at 10:30 o'clock a. m.)

TRANSCRIPT OF RECORD.

SUPREME COURT OF THE UNITED STATES.

OCTOBER TERM, [redacted] 1919

No. 481. 1[redacted]6

THE UNITED STATES OF AMERICA, APPELLANT,

vs.

UNITED STATES STEEL CORPORATION ET AL.

APPEAL FROM THE DISTRICT COURT OF THE UNITED STATES FOR THE DISTRICT OF NEW JERSEY.

VOLUME 18.

DEFENDANTS' TESTIMONY.

FILED MAY 12, 1919.

VOLUME XVIII.

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NINETY-SEVENTH DAY.

EMPIRE BUILDING,
71 Broadway, New York City,

Friday, October 17, 1913.

Before Special Examiner JOHN ARTHUR BROWN.

Present on behalf of the United States, MR. DICKINSON and MR. COLTON.

Present on behalf of the Defendants, MR. LINDABURY, MR. SEVERANCE, MR. BOLLING and MR. REED.

OCTAVUS N. HUTCHINSON

was called as a witness on behalf of the defendants, and being first duly sworn, testified as follows:

DIRECT EXAMINATION

By MR. LINDABURY:

Q. Where do you live?

A. Grand Crossing, Chicago, Illinois.

Q. What is your business?

A. I am president of the Grand Crossing Tack Company.

Q. How long have you held that position?

A. About 13 years.

Q. When was that company established?

A. In 1883.

Q. What was your first connection with it?

A. In the operating department, in 1891.

Q. Since that time what has been your part?

A. Up to the time I took the presidency I was the head of the operating department.

Q. What do you mean by "operating"—manufacturing or selling?

A. I mean the manufacturing end of it.

Q. The name would imply that that company manufactured tacks; is that a fact?

A. Yes.

Q. What was its business at the beginning?

A. Manufacturing tacks from plate.

Q. That is, the blue tack we used to see?

A. The ordinary carpet tack, cheese-box tack, berry-box tack, or something of that kind.

Q. Did it enlarge its business at any time?

A. Yes, sir.

Q. Taking in, I mean, new branches?

A. When I went with the company in 1891, they started in the wire end of it; that is, we found that we had to get in new machinery so as to make tacks and nails from wire instead of from plate.

Q. Why?

A. Because wire nails had just begun to be introduced into this country, and we found that they were superseding some of our sales on the plate tacks and nails.

Q. Did you make anything except tacks from plates?

A. That is all.

Q. Not at any time?

A. Well, we make a few burrs, what is known as burrs, a little washer that goes on the end of a rivet. Those are stamped out from plates.

Q. You still do that?

A. Yes; but the quantity is so small that it is hardly necessary to mention it.

Q. Do you still make carpet tacks from plates?

A. Yes, sir.

Q. Has the trade in that diminished in comparison with the trade in wire tacks?

A. It has diminished.

Q. What wire products, if any, have you made besides nails?

A. We make barbed wire, woven wire fence and rivets, double point tacks and staples.

Q. Did you mention plain wire?

A. And plain wire. Then, of course, the rods from which those are made. We sell some of them, too—the raw rods.

Q. Which is your largest production?

A. Our largest production in any one article would be standard wire nails.

Q. Do you make those in various sizes?

A. Yes, sir; in all sizes.

Q. Have you a considerable trade in those?

A. Why, comparatively speaking, our product perhaps is a small percentage of the entire output of the country.

Q. Do you mind telling us what your tonnage is?

A. In the wire nails?

Q. No; in all steel products that you handle.

A. In all steel products our tonnage which we sell would be about 52,000 tons a year. That would include some billets.

Q. What is your product in nails?

A. About 325,000 kegs a year.

MR. DICKINSON: I would like to enter an exception here which would be a continuing one: We except to so much of this evidence and subsequent questions and answers as refers to the present time or to any period since the filing of the petition in this cause.

By MR. LINDABURY:

Q. You spoke of rods; where do you get them?

A. We roll them from billets in the department that is called our rod mill.

Q. How long have you been doing that?

A. Since the early part of 1900.

Q. Where do you get your billets?

A. They are made in our own steel plant.

Q. How long have you been making your own billets?

A. About ten years. I think we began in August, 1903.

Q. Where did you get them before that?

A. We purchased them.

Q. In the market?

A. In the market.

Q. When did you put in furnaces?

A. That is, open hearth furnaces?

Q. Yes; if you did. I understood you did.

A. We started them in July, 1903.

Q. What other mills have you put in within ten or fifteen years?

A. Well, besides building this steel plant we have tried to put in more finishing ends to our institution, so that we could convert the rods into materials that got more nearly to the consumer.

Q. When did you build your steel mill?

A. In 1902 and 1903.

Q. You must be, then, purchasers of pig iron?

A. Yes, sir.

Q. How long have you been purchasing pig iron?

A. Since 1903.

Q. Where do you get that?

A. In the general market in the United States, wherever I can buy it the cheapest.

Q. What have been your purchases of pig iron? Have you any recollection that would enable you to tell about what your annual purchases of pig iron would be?

A. They would be about 20,000 tons a year.

Q. Have you purchased any of that from the Steel Corporation or any of its subsidiaries?

A. We have purchased iron from the Illinois Steel Company in a small way, and in quite a large way from the Tennessee Coal, Iron & Railroad Company; both companies, I presume, are subsidiaries of the United States Steel Corporation.

Q. When did you begin to purchase from the Tennessee Coal, Iron & Railroad Company?

A. In 1903.

Q. Have you purchased from them pig iron each year since that time?

A. Not every year.

Q. Who else have you purchased pig iron from for your use?

A. From the Virginia Iron Company or the Virginia Iron & Coal Company, whatever their name is; from Snyder, in Pittsburgh; from Pickands-Brown; from Rogers-Brown; from the Inland Steel Company; from Tittman, Williams & Company; I think that is about all for the general supply.

Q. What percentage, about, of your requirements, have you bought from the Tennessee Coal, Iron & Railroad Company since 1907? A rough estimate will do.

A. I should say about 15 per cent.

Q. And the balance you bought from the other concerns you have named?

A. Yes.

Q. Has the percentage of your purchases from the Tennessee Coal, Iron & Railroad Company changed since 1907 from what it was before that time?

A. Not materially.

Q. On what basis have you divided your orders?

A. According to the lowest price I was able to obtain in the market.

Q. Do you make your purchases under yearly contracts, or from time to time as you may need material?

A. From time to time, as I consider the condition of the market.

Q. How do you ascertain the best price you can get?

A. Generally by sending out a circular letter wanting quotations to everybody that I know of that has pig iron to sell.

Q. Do these letters usually go to these concerns you have named?

A. Yes, and others.

Q. How are your quotations you receive, in answer to these letters; are they uniform or varying?

A. They vary.

Q. Has that been so constantly since you have been purchasing?

A. Constantly.

Q. Since 1903 down?

A. Since 1903 down.

Q. Has there at any time been any uniformity in the price of pig iron quoted to you?

A. No, sir.

Q. Has there been at any time any observable absence of competitive conditions in the pig iron market during the period you have been purchasing pig iron?

MR. DICKINSON: That is objected to as calling for a conclusion of the witness, being too vague and indefinite a proposition, and not calling for facts upon which his conclusion is based.

THE WITNESS: No, sir.

By MR. LINDABURY:

Q. What have been the circumstances governing the trade in pig iron which have indicated to you continuing competitive conditions?

A. Why, at all times I would get a variation in price, varying anywhere from $1 to $2 a ton; sometimes it would be one concern that would be high, and sometimes another.

Q. What of the products of steel have you sold to the trade during the last ten years?

A. I have sold billets, rods, standard wire nails, smooth wire, barbed wire, woven wire fence, what is known as market wire, rivets, staples and double pointed tacks.

Q. Does that include substantially all of the standard wire products?

A. Yes; what would be known as standard wire nails and kindred wire products.

Q. Have your sales of billets and rods been as great in proportion to your other sales during the last few years as formerly, or do you now make more of those up into finished products?

A. We make more of them up into finished products.

Q. Where do you sell these wire products?

A. In that section of the country that would be represented by a cone, Chicago, being the apex, and then drawing a line to the northwest and the southwest, out just beyond the Missouri River; that territory right in there.

Q. How do you carry on your trade; by canvassers—I mean salesmen, or in some other way?

A. By a corps of traveling salesmen that act direct from our own office at Grand Crossing.

Q. Has there at any time since you have been selling these wire products, or any of them, been any combination or agreement, express or implied, between your company and any

other purchaser or seller of wire products, regulating or attempting to regulate prices, restricting output or controlling territory?

Mr. Dickinson: That is objected to as irrelevant.

The Witness: No, sir.

Mr. Lindabury: Well, if that evidence is irrelevant, then we might take out considerable that you have put in. I think we might agree on our side, under that objection, to strike out all evidence in the case along that line.

Mr. Dickinson: We have not any evidence that he was in any combination, that I know of. I never heard of his concern before.

By Mr. Lindabury:

Q. Who have been your competitors during the time you have been selling these wire products in the territory in which you have sold them?

A. The Pittsburgh Steel Company, the American Steel & Wire Company, Jones & Laughlin, the Cambria Steel Company, the Youngstown Sheet & Tube Company, and three concerns in the Ashland district which are known as the "Ashland crowd." I think that is about all.

Q. Have you observed or discovered during the period that you have been manufacturing and selling wire products any agreement or combination, express or implied, affecting prices, output, or territory, among any of your competitors in the sale of wire products?

A. No, sir; not to my knowledge and observance.

Q. Has there or not, in the sale of those products throughout the period that you have named, been real and active competition among the concerns that you have named?

A. The best of my observance has shown that there has been real and active competition.

Q. Has that competition extended to prices?

A. Yes.

Q. Quality?

A. Yes.

Q. Delivery?

A. Yes.

Q. Has it or not stopped short of or failed to include any element affecting the desirability of dealings with one concern or another? I mean, has there been any element affecting the sale of wire products with respect to which there has not been competition, so far as you know or have observed?

A. So far as I know, we have had to go out for business, and have met all kinds of competition in all ways.

Q. And how long has that been the case?

A. Ever since we started to make wire nails.

Q. And how active or keen has that competition been?

A. It has been keen enough so we have had to keep our eyes open all the time, and our ears, too.

Q. Eyes and ears both?

A. Eyes and ears both.

Q. Is the situation in the trade with respect to these matters you have spoken of, during the last two or three years, any different from what it has been during the last ten or twelve years?

A. No, sir; just the same.

Q. Among the competitors in the sale of these wire products has there been any one or class of them whose prices were uniformly higher or uniformly lower than the others, or are prices of one manufacturer sometimes higher and sometimes lower?

A. Well, there is the regular competitive condition that you would find in the market. Sometimes you get an order from a customer and sometimes you cannot. Sometimes you can find out who has got it, and sometimes you cannot.

Q. And has that been the case for all the years of which you have spoken?

A. Yes, sir.

MR. LINDABURY: Take the witness.

CROSS EXAMINATION

By MR. DICKINSON:

Q. Do you sell east of Chicago? If so, how far?

A. Oh, very little.

Q. Your trade, then, has been almost altogether within the territory you have described?

A. Yes, sir.

Q. Lying northwest and southwest of Chicago?

A. Yes.

Q. Chicago being the apex of the cone you have described?

A. Being more directly west.

Q. More directly west?

A. And it would be limited to the northwest and the southwest by the extent of that cone.

Q. And the Missouri River is the western margin of it?

A. Well, we get perhaps a hundred miles the other side of the Missouri River; something of that kind.

Q. Constantly or occasionally?

A. Oh, occasionally.

Q. Occasionally?

A. Yes.

Q. Did you ever hear of the Bessemer Iron Association, and the connection with it of Mr. J. G. Butler, of Youngstown, Ohio?

A. Only what I have seen in the newspapers.

Q. Did you buy any of your iron from any of the members of that association?

A. Why, I believe that there was a broker in Chicago once that sold us some iron that came from the—that is, from the Brier Hill people.

Q. But I mean have you dealt directly with any of the members of that association?

A. Well, I do not know that there is any association, except what I have seen in the newspapers.

Q. Did you deal directly with any of the people who were publicly credited with being members of that association?

A. No, sir.

Q. Do you know anything about their prices?

A. No, except what I see in the newspapers.

Q. You have been president of this company thirteen years?

A. Yes, sir.

Q. During that time what have been your duties, mainly?

A. To supervise the purchases, and supervise the sales, and I am also treasurer, to take care of the finances of the institution.

Q. Did you sell plain smooth wire?

A. Yes, sir.

Q. As far back as 1903?

A. Yes, sir.

Q. What quantity did you sell then, about?

A. Oh, now, plain smooth wire—is that what you are talking about?

Q. Yes.

A. Oh, I should say ten or twelve thousand tons a year.

Q. In what territory?

A. This same territory; that is, approximately. I might get east a little with a little of my material, but not a great deal.

Q. At that time was there known in the trade such a thing as a base price?

A. Yes.

Q. For selling that wire?

A. Yes.

Q. You were selling in 1902, also, were you?

A. Yes, sir.

Q. Do you know what the base price of plain, smooth wire was in February, 1902?

A. Well, now, do not confine me too close to dates.

Q. I am going to give you some others.

A. February, 1902?

Q. Yes.

A. I should say about $1.80, Pittsburgh.

Q. What would that be a ton?

A. That would be $36 a net ton.

Q. Explain what "base price" meant as of that time, as applied to plain smooth wire.

A. Why, it meant—as I stated in my direct examination, we sold standard wire nails and kindred wire products; smooth wire is a kindred wire product with a standard wire nail—and we have an established differential for this kindred wire product; and when we say standard wire nails

were worth so much Pittsburgh, that takes with it the established differentials.

Q. To what did the base price apply in respect to what you are now talking of?

A. It applied to the base price of what would be known as black annealed wire, and that was an established differential between that and the base price of the standard wire nails.

Q. Were the prices calculated from this base price by allowing for the differential?

A. That is, the difference between the base price of the standard wire nail and the base price of black smooth wire.

Q. Do you not know, Mr. Hutchinson, that that base price at that time was a general one that was observed by the manufacturers of plain smooth wire, and that the differentials were calculated from that base price, and that this base price entered as a constant factor into the sales of those articles for which the differential was allowed?

A. I do not comprehend the scope of your question.

(The question was repeated by the stenographer.)

THE WITNESS: The base price itself would change according to market conditions.

By MR. DICKINSON:

Q. Would not that base price prevail over long periods of time, several months at a time?

A. At times it would, if there was a good sale for wire products; if they were in great demand.

Q. Was that base price known generally in the trade and assumed as a basis at which the prices started, allowing for these differentials you spoke of?

A. That is approximately it.

Q. Was that true of standard nails?

A. Approximately so.

Q. How about barbed wire?

A. Approximately the established differential.

Q. Can you give approximately the base price upon plain smooth wire for March, 1902?

A. I think I have already answered that—$1.80, as nearly as I can remember.

Q. I asked you about February.

A. Oh, well, it would be impossible for me to remember the prices of wire products from month to month for ten years.

Q. I ask you as a matter of fact if, for the larger part of 1902, the base price was not constant.

A. Why, in a general way I would say no, because, as a general proposition, prices would not remain steady as long as that.

Q. Have you any definite recollection about that?

A. I have no recollection except that I know that the price of standard wire nails and kindred wire products have constantly been on the change.

Q. What do you mean by "constantly?"

A. I mean that every two or three months there would be a change.

Q. But within that time there would be steady prices, would there?

A. Sometimes as far as we were concerned, but perhaps as far as we would learn what our competitors were doing, they would be doing different from us. If we had our order books full of orders, our prices would be constant.

Q. Your sales were comparatively small, were they not, in comparison, say, with those of the American Steel & Wire Company?

A. I stated in the first place that we were a small factor in the steel world.

Q. And you bought your pig iron, did you?

A. We bought pig iron and scrap for our own mill.

Q. You had no iron ore properties?

A. No, sir.

Q. You were dependent entirely upon the market for your supply?

A. Yes, sir.

Q. Did you have a sales agent?

A. Only as represented in myself. We were not big

enough to have all of the paraphernalia that goes with large institutions.

Q. I believe you said you put in open hearth furnaces in 1903?

A. We started them in 1903; we started to build them in 1902.

Q. How much pig iron did you make in those furnaces when completed?

A. We did not make pig iron in open hearth furnaces.

Q. Oh, these were steel furnaces?

A. Steel furnaces.

Q. How much steel did you make?

A. We make approximately 60,000 tons of ingots a year; somewhere around there.

Q. In 1902 state who your principal competitors were in the territory in which you were then selling, in the kind of products you have described.

A. The American Steel & Wire Company and those three concerns in the Ashland district that I spoke of, I think, would be the only ones to get into our territory that amount to anything.

Q. In 1898 give me a list of who your competitors were in that territory.

A. They would be the American Wire Nail Company of Anderson, Indiana—I may not give these names exactly accurate, but they will be approximately accurate—and the American Wire Company of Cleveland; the Salem Wire Nail Company——

Q. Is that the American mill at Cleveland, Ohio, where you spoke of the American Wire Company of Cleveland?

A. The American Wire Company, I think, was their name at that time.

Q. The American Steel & Wire Company?

A. No, not the American Steel & Wire Company; the American Wire Company.

Just a moment; I may want to correct myself on that. What is the date?

Q. 1898. That is the year preceding the formation of the American Steel & Wire Company.

A. Then I wish to correct my entire testimony on that.

Q. Very well; now answer.

A. It would be the American Steel & Wire Company.

Q. Where located?

A. I think their headquarters were at Chicago at that time. And also—I think they called themselves the Shenango Steel Company at that time, if I remember rightly.

Q. Where were they?

A. They were at Newcastle; and the Dillon & Griswold Wire Company of Sterling, Illinois; Washburn & Moen, of Worcester, Massachusetts, and Waukegan, Illinois. The competition would come especially from the Waukegan factory in our territory. I think that is all.

Q. Those were your main competitors in the year you have described, 1898?

A. Yes.

Q. How many of those concerns went into the American Steel & Wire Company?

Mr. Lindabury: I object; I was going to object before, but I thought it was going to be a single question. The direct examination was limited to the period of the last ten or twelve years, or since the Steel Corporation was formed, and therefore I object to any inquiry with regard to an antecedent period, which is not cross examination.

Mr. Dickinson: Answer the question, please.

The Witness: Please repeat the question.

(The pending question was repeated by the stenographer.)

The Witness: That is the American Steel & Wire Company of New Jersey you are talking about now?

By Mr. Dickinson:

Q. Yes.

A. I think they all did, except the Dillon & Griswold Company.

Q. Don't you know that the wire department of that was subsequently acquired by the American Steel & Wire Company?

A. The Dillon & Griswold Company?

Q. Yes.

A. No, sir; never. That is one question that I can answer positively, because I have just sold the plant out myself as receiver of the plant.

Q. You feel sure about that answer?

A. Yes, I can be positive on that one.

REDIRECT EXAMINATION

By Mr. Lindabury:

Q. Was this base price that you alluded to ordinarily published in the trade journals?

A. Why, the base price that we were approximately trying to get would be in the trade journals.

Q. Was that anything more than some approximation of the price you really did get?

A. It was generally an approximation of it.

Q. Was that price thus published ordinarily quoted by you or your competitors in your strife for trade?

A. Sometimes it was and sometimes it was not.

Q. Generally?

A. Generally not.

Q. When it was quoted was it generally the contract price that was finally made?

A. That would all depend upon the condition of the wire market. If the wire market was advancing we could get these trade publication prices; if it was not we had to get what we could get.

Q. And you did take what you could get?

A. Yes.

Q. And was that the case with your competitors, too?

A. Of course I do not know as to my competitors, only in so far as we are able to find out what our traveling salesmen can pick up; that is information of one kind or another.

Q. So far as you were able to learn, was this habit of quoting without regard to the base price such a price as you thought you could get, without regard to conditions affecting your competitors?

Mr. Dickinson: I object to that, as he stated he did not know about his competitors.

THE WITNESS: I would not know what my competitors were doing, except what I could find out by general information, and various ways of finding out.

By MR. LINDABURY:

Q. So far as you could find out in the ways you say you could find out, was the course pursued by you the same course as was pursued by your competitors?

MR. DICKINSON: Objected to as too general; it does not call for particular instances or the facts with respect to them upon which the witness could base an answer.

THE WITNESS: Yes.

By MR. DICKINSON:

Q. You stated that you did not know of your own knowledge what your competitors were doing with regard to a base price.

A. Only in so far as we were able to pick it up from information we obtained from various sources.

Q. Have you any particular instances in mind?

A. No, sir.

Q. And you are only speaking in a general way?

A. That is all.

AUGUST PAHL

was called as a witness on behalf of the defendants, and being first duly sworn, testified as follows:

DIRECT EXAMINATION

By MR. SEVERANCE:

Q. Where do you live?

A. New York City.

Q. What is your business?

A. The hardware business, purchasing agent.

Q. Purchasing agent for what concern?

A. Hammacher, Schlemmer & Company.

Q. Is that a new or an old concern?

A. An old concern.

Q. How long has it been in business?

A. Since 1848.

Q. Where is your place of business at the present time?

A. Fourth Avenue near 13th Street.

Q. How long have you been connected with Hammacher Schlemmer & Company?

A. Twenty-eight years.

Q. What class of commodities do Hammacher, Schlemmer & Company deal in?

A. Everything in the hardware line, steel and iron.

Q. Wholesale or retail?

A. Both, wholesale and retail.

Q. Do you and have you for the last eight or ten years made any purchases from the different subsidiary companies of the United States Steel Corporation?

A. I have.

Q. Which ones of the subsidiary companies have you bought from?

A. Principally the American Steel & Wire Company.

Q. And what class of products have you purchased from the American Steel & Wire Company?

A. Wire nails, both standard and miscellaneous; Bessemer rods, some poultry netting, some crucible steel wire, some wire tacks, and a few minor items that I cannot recall just now.

Q. Have there been in this market, during the time that you have purchased such articles from the Steel & Wire Company, other steel companies doing similar lines of business?

A. What is the question again?

MR. SEVERANCE: Read the question.

(The question was repeated by the stenographer.)

THE WITNESS: Yes.

By MR. SEVERANCE:

Q. Taking these articles up separately, what competitors, if any, have the Steel & Wire Company had in this market? I am not confining this question now as to the ones you have made purchases from, but the ones you know of as being in the market?

A. In what particular commodity?

Q. Wire nails.

A. Well, there is the Pittsburgh Steel Company, of Pittsburgh; that is one. The Cambria Steel Company, of Youngstown, Pennsylvania, is another.

Q. Johnstown?

A. Johnstown, I should say, yes; and Wickwire Brothers, of Cortland, New York.

MR. DICKINSON: What is that name?

THE WITNESS: Wickwire.

By MR. SEVERANCE:

Q. You know of them in the same business?

A. Yes.

Q. Have you purchased a portion of your supply from some of these concerns, other than the American Steel & Wire Company?

A. I have.

Q. From which ones?

A. From all of them.

Q. From all of them?

A. Yes.

Q. How are your purchases ordinarily made? Do you buy your entire requirements for a year ahead, or do you buy from time to time?

A. As our needs require only.

Q. As your needs require?

A. Yes.

Q. And in making purchases in this line, that is, nails—well, I will include all lines—what considerations govern you in determining as to which one of the manufacturers or dealers shall secure your order?

A. Well, principally price.

Q. And any other considerations?

A. Yes; quality and delivery.

Q. What has been your experience during these years that you have been buying nails, as to whether the different competitors that you have mentioned quoted the same prices or different prices in the market on that commodity?

MR. DICKINSON: What period is that?

MR. SEVERANCE: For the last eight or ten years.

THE WITNESS: Well, prices have fluctuated from time to time, and that is why I bought from one and then from the other, and so on.

By MR. SEVERANCE:

Q. Sometimes one would be higher and sometimes another?

A. Yes.

Q. Now, taking another item; you spoke of Bessemer rods, did you not, as one?

A. Yes, sir.

Q. Covering this same period of eight or ten years past, from whom have you bought Bessemer rods from time to time?

A. The Spencer Wire Company, of Worcester——

MR. DICKINSON: (Interposing) What is the name of that company?

THE WITNESS: The Spencer Wire Company, of Worcester, Mass., and a concern by the name of Robertson, in Cincinnati.

By MR. SEVERANCE:

Q. You have already stated, I believe, that you also bought from the American Steel & Wire Company?

A. Oh, yes, and the American Steel & Wire Company.

Q. Yes. Now, has your experience as to the fluctuation in prices and the fact that one was sometimes higher than another, been the same in that line as with respect to the nails, or different?

A. Just the same.

Q. And have the same or different considerations governed you in placing your orders?

A. The same considerations.

Q. You spoke of wire tacks. Covering that same period, from what concerns have you purchased wire tacks, aside from the American Steel & Wire Company?

A. Wire tacks we have only purchased from the American Steel & Wire Company.

Q. Do you handle any other tacks that are sold in the market in competition with wire tacks?

A. Yes what they call a cut iron or cut steel tack.

Q. And from whom have you bought them?

A. Bought them from the Atlas Tack Company, of Fairhaven, Mass., the Shelton Company, of Shelton, Conn., Sam Salmond & Son, Hanover, Mass., and others from time to time, but those are the principal ones.

Q. Have you bought any tacks from Mr. Hutchinson's Company, the witness who was just on the stand, the Grand Crossing Tack Company?

A. No, we never did. We have sent them inquiries from time to time, but we have never connected. We are too far east for them.

Q. What other concerns, aside from the ones that you have bought from, do you know of as in the market here?

A. In what line, for instance?

Q. First, in wire tacks. You have only mentioned the Steel & Wire Company as the one from which you purchase. What other concerns are there selling wire tacks in the market?

A. I do not know of any, offhand. I believe Wickwire Brothers sell wire tacks.

Q. Does not the Atlas Tack Company also sell wire tacks?

A. Yes.

Q. Is there not another one at Taunton, Mass.?

A. Yes, the Taunton Globe Tack Company, of Taunton, Mass.

Q. How is it as to whether there has been active or any competition in the sale of tacks by the various manufacturers in this market? Has there been competition?

A. Oh, yes; very much.

Q. Very active?

A. Very much.

Q. You spoke of one product as a rather small product, crucible steel wire, did you not?

A. Yes.

Q. You said it was a rather small matter?

A. Yes.

Q. That you had bought some from the American Steel & Wire Company?

A. Yes.

Q. From what other companies, if any, have you purchased that commodity?

A. The Spencer Wire Company, of Worcester; the Trenton Iron & Steel Company, of Trenton, New Jersey; and the John A. Roebling—I mean Cooper-Hewitt, of Trenton.

Q. That is the old Cooper-Hewitt Company?

A. Yes.

Q. What about the Cary Spring Company? Have you bought from them?

A. They are small manufacturers. We have bought from them from time to time. As I said before, that crucible steel wire is a small item with us.

Q. I will ask you whether your purchases in that line and the line of wire tacks, have been governed by any different considerations than the others?

A. No, the same.

Q. All the same?

A. Yes; price, quality and delivery.

Q. You spoke about poultry netting. From what concerns have you purchased poultry netting during this period?

A. The American Steel & Wire Company; the Clinton Wire Cloth Company, of Clinton, Mass.; the New Jersey Wire Cloth Company, of Trenton, New Jersey; Gilbert & Bennett. I do not know where their factory is located, but they have a city office here.

Q. They are up in Connecticut somewhere, are they not?

A. Yes, up in Connecticut; and the Wright Wire Company, of Worcester, Mass.

Q. What has been the nature of the competition between these various concerns?

A. Very competitive.

Mr. Dickinson: This is objected to as calling for a conclusion on the part of the witness, and the answer as being a mere conclusion of the witness.

By Mr. Severance:

Q. I will ask you have these concerns been competing in this market for that business?

A. Yes, they have.

Q. And has that competition been active or otherwise?

A. Quite active.

Q. Have your purchases been determined by the same considerations as in the cases of the other articles you mentioned?

A. Yes.

Q. Sometimes one company and sometimes another company has secured your orders?

A. Yes.

Q. Do you at any time make any purchases in this market from jobbers?

A. Occasionally.

Q. For what purpose do you buy from jobbers?

A. Merely to pick up for hurry orders.

Q. Something you happen to be short of?

A. Yes, that is it.

Q. Ordinarily, you buy from the mills, do you?

A. From the mills.

Q. Is your company, or Hammacher, Schlemmer & Company, one of the oldest hardware establishments in this city?

A. One of the oldest.

MR. SEVERANCE: I think that is all, Judge.

CROSS EXAMINATION

By MR. DICKINSON:

Q. When did the Pittsburgh Wire Company and the Cambria, respectively, go into the business of wire nails?

A. Well, Pittsburgh——

MR. SEVERANCE: (Interposing) You do not mean the Pittsburgh Wire Company; you mean the Pittsburgh Steel?

MR. DICKINSON: Yes, the Pittsburgh Steel Company.

THE WITNESS: Well, the Pittsburgh Steel Company has been in it for some years; I should judge, about eight or nine years back.

By Mr. Dickinson:

Q. And the Cambria when?

A. Only recently.

Mr. Severance: How recently, if you do not mind me asking the question, Judge.

Mr. Dickinson: Yes.

The Witness: About two years.

By Mr. Dickinson:

Q. Until the Pittsburgh went into the business, from whom did you get your wire nails?

A. Until they went into the business?

Q. Yes.

A. The Pittsburgh Steel Company?

Q. Yes.

A. We bought them from the Wickwire people, and principally through jobbers or agents who went around selling wire nails.

Q. Did you not state that you had bought from the American Steel & Wire Company?

A. Yes; and the American Steel & Wire Company, yes.

Q. Up to the time that the Pittsburgh went into the business were not your principal purchases from the American Steel & Wire Company?

A. Yes.

Q. Up to the time the Cambria went in, were not your principal purchases from the American Steel & Wire Company?

A. Yes, sir.

Q. Up to the time that the Pittsburgh went in did not the American Steel & Wire Company control almost entirely the manufacture of wire nails in the United States?

Mr. Severance: I object to that as calling for a conclusion. The witness has stated that he bought in the market from jobbers and from Wickwire Brothers.

By Mr. Dickinson:

Q. Go ahead and answer.

A. Up to the time before the Pittsburgh Steel Company came in as competitors, we bought from the American Steel

& Wire Company, and other nails we also bought from jobbers who were jobbing nails from various manufacturers who made wire nails; but the principal and the majority of nails we bought from the American Steel & Wire Company up to that time.

Q. From the time of the formation of the American Steel & Wire Company down to the time that Pittsburgh went into the business, what large makers were there of wire nails in the United States that you can name?

A. The only one I know was the Wickwire people in Portland.

Q. What was the extent of their production; do you know?

A. I could not tell you that.

Q. Was it not very small in comparison with that of the American Steel & Wire Company?

A. I could not tell you that either, about how small it was. They were considered big factors in the business, the Wickwire people.

Q. At that time?

A. At that time.

Q. And you do not know what their product was compared with the others? Do you know anything about it?

A. All I know is that we bought nails from them.

Q. That is all you know, that you bought some nails from them; but you bought the bulk of them from the American Steel & Wire Company?

A. From the American Steel & Wire Company, that is right.

Q. You stated that for eight or ten years prices fluctuated from time to time?

A. Yes, sir.

Q. Were there not long periods of time within that eight or ten years when they did not fluctuate?

A. Long periods?

Q. Yes.

A. It all depends on what you mean by long.

Q. Months at a time?

A. Oh, yes; they remained the same for a month or so.

Q. You say "a month or so." Did they not remain the same——

A. I asked you what you called a long period of time, and you said a month. Then I said yes.

Q. No. I said for months at a time.

A. Oh!

Q. I will ask whether there were not periods continuously of as much as six months?

A. Yes.

Q. Throughout that eight or ten years, from time to time?

A. No; not from time to time, for six months; no, I will not say that.

Q. But there were periods within that eight or ten years where the price was constant for as much as six months?

A. Well, say about six months, yes.

MR. DICKINSON: That is all.

MR. SEVERANCE: I have no further questions.

(Whereupon a recess was taken until 2 o'clock p. m.)

AFTER RECESS.

MAXYMILIAN LEWINSON

was called as a witness on behalf of the defendants, and being first duly sworn, testified as follows:

DIRECT EXAMINATION

By MR. SEVERANCE:

Q. Mr. Lewinson, where do you live?

A. 44 West 77th Street, New York.

Q. Where were you born, Mr. Lewinson?

A. In Russian Poland.

Q. What is your profession?

A. Civil engineer.

Q. Where were you educated?

A. In Switzerland.

Q. Whereabouts? At Zurich?

A. Yes, sir.

Q. In the Polytechnique School at Zurich?

A. Yes, the engineering school.

Q. How long have you lived in New York, Mr. Lewinson?

A. Since 1880.

Q. During the time you have resided in New York, what has been your business?

A. First, for seven years, I was engineer to an architect.

Q. Engineer to an architect?

A. Yes; did all his engineering work, and afterwards, I have been for a few years for myself as a consulting engineer. In 1887 I accepted the position of civil engineer of the Building Department.

Q. Of the city?

A. Yes, of the city, and I was there nearly two years—not quite two years; and then started for myself as a contracting and consulting engineer.

Q. And since along in the middle eighties—1885 or 1886—you have been a contractor here in the city?

A. No, since 1889.

Q. Since 1889?

A. Yes.

Q. A contractor and consulting engineer?

A. Yes.

Q. What kind of contracts have you executed? What is the nature of the contracts?

A. Oh, mostly steel construction for buildings.

Q. Can you name some of the large buildings in the city here that you have built?

A. Yes, the Metropolitan Opera House; that was one.

Q. Give us a few of them.

A. The New York Theater, the Lexington Opera House——

MR. DICKINSON: (Interposing) Which opera house?

THE WITNESS: The Lexington Opera House. The Doelger Brewery; the ice plant for Ruppert. That was one of the

largest contracts that I ever had—about 9,000 tons. I had many commercial buildings, such as the corner of 15th Street and Fifth Avenue; the corner of 15th Street and Union Square; Lexington and 21st Street—I cannot recall them all.

By Mr. Severance:

Q. Did you build the New York Telephone building?

A. Yes, the New York Telephone building.

Q. Have you built apartment houses?

A. Yes. 44 West 77th Street, where I am living. I built a number in Madison Avenue, but I cannot remember the locations exactly, and other buildings.

Q. And you have been continuously in that business?

A. Yes, sir.

Q. For all that time?

A. Yes.

Q. Have you a fabricating shop of your own, or not?

A. No. That is, I have only for small work; not large work.

Q. Then what part of the work do you do?

A. Only, for instance, if anyone wants a few beams from stock, you know, I keep the stock, and I cut and punch, and that is all the work I do.

Q. You do that at that small plant?

A. Yes.

Q. When you take a contract to build a building, you buy the fabricated steel, do you?

A. Yes.

Q. In the market?

A. In the market.

Q. Now, from what different concerns during the past ten or twelve years have you bought steel for these different buildings that you have built?

A. Oh, I have been buying from the American Bridge Company, and Roberts, when he was at Pencoyd.

Q. That is now in the Bridge Company?

A. Yes. Cambria. I have been buying only beams there. Passaic, at the time of their existence, and different other people, wherever I could get the cheapest.

Q. Have you bought any from Bethlehem?

A. Yes, Bethlehem, certainly; very much.

Q. The Lehigh Valley Structural?

A. Yes, structural iron.

Q. Have you bought generally from all the people in the business?

A. Yes. Whoever was the cheapest delivery.

Q. What has governed you in determining which one you would buy from?

A. The time of the delivery and the price.

Q. The time of delivery and the price?

A. Yes.

Q. Have these various concerns that you have mentioned called on you at times—their agents?

A. Yes. They know of all jobs of importance and they come to solicit the work; call up on the telephone, or send agents for the orders.

Q. Then do they make tenders?

A. Yes, I give them a list of the material, enumerate it, the same to all, and they give me written——

Q. (Interposing) Bids?

A. Yes, bids.

Q. And you let it to the lowest bidder?

A. Yes.

Q. To make the delivery?

A. Yes.

Q. Has it sometimes happened that more than one of these companies would get a portion of the work?

A. Yes; sometimes the job is very large, and it is necessary to split.

Q. Have you had any cases where the Bethlehem section has been prescribed in the specifications?

A. Oh, yes; but also I change standard section to Bethlehem, sometimes, on account of its being cheaper to do it.

Q. And use the Bethlehem section?

A. Yes.

Q. Instead of the standard?

A. Yes.

Q. In taking these contracts for these large buildings that

you have built, Mr. Lewinson, how do you get the contracts; are they assigned to you right out, or do you bid on them?

A. I bid on them.

Q. After the contract is let to you, you provide yourself with the material as you have stated?

A. Yes.

MR. DICKINSON: He has not said that he did that afterwards.

MR. SEVERANCE: That is so.

By MR. SEVERANCE:

Q. Do you ordinarily ask for the prices before you get the contract or afterward?

A. No, never, on account of having found out that it is much better, and I get better prices if I have the job than if I ask before.

Q. So you found it to your advantage to get the bids afterwards?

A. Yes.

Q. Have there been any times that the American Bridge Company has been a competitor of yours in that work?

A. Yes.

Q. Have you at any time secured contracts for buildings when they were bidders?

A. Yes.

Q. When you build buildings, who makes the drawings and specifications, ordinarily?

A. In most cases the architect has the general plans figured out. We are making all the drawings.

Q. At your office?

A. At my office.

Q. And you do the erection with your own men?

A. Yes, sir.

MR. SEVERANCE: I think that is all.

CROSS EXAMINATION

By MR. DICKINSON:

Q. Which is the last of these large contracts that you fulfilled?

A. That was at 15th and Union Square, the northeast corner. It was a job for the Van Buren Estate, a 12 story building, and took about 1,200 tons.

Q. Your work mainly involves the use of fabricated material that you buy from the makers of that material?

A. Yes, sir.

FREDERICK W. WURSTER

was called as a witness on behalf of the defendants, and being first duly sworn, testified as follows:

DIRECT EXAMINATION

By Mr. Lindabury:

Q. Where do you live?

A. At present I am stopping at Garden City.

Q. What is your business?

A. Rolling mill and axle works.

Q. Where are they located?

A. On Kent Avenue, corner of South Sixth Street, Brooklyn.

Q. When was that business established?

A. The axle business in 1880, and the rolling mill, I should think, somewhere in the neighborhood of 1885 or 1888.

Q. By whom were they established?

A. By myself originally.

Q. Is your business incorporated?

A. It is at present, and has been for about seven years.

Q. What is the name of the business?

A. F. W. Wurster & Company, Incorporated.

Q. What do you use in your rolling mill?

A. Scrap iron.

Q. Which you buy, I suppose, in the market?

A. We buy it in the market from the different scrap iron dealers.

Q. What do you manufacture that scrap into?

A. Into merchant iron bars, rounds, flats and squares.

Q. Where do you sell them?

A. In Greater New York.

Q. Throughout all the boroughs?

A. Throughout all the boroughs in Greater New York, and once in a while we ship small lots out of town.

Q. What do you use in your axle works?

A. We use a great deal of square iron which we manufacture in our own mill, and then we purchase quite large quantities of square-edged axle billets, steel billets.

Q. Are they known in the trade as axle billets?

A. Yes, I presume they are.

Q. At any rate, they are known to you as axle billets?

A. Yes.

Q. What is about their size?

A. We buy from an inch and three-quarters to four inches.

Q. What do you do with them?

A. We hammer them into axles.

Q. For what use?

A. For wagons and heavy trucks, principally.

Q. Where do you sell them?

A. In Greater New York and all over the Eastern States.

Q. You say you buy these axle billets? Do you buy them from the steel manufacturers?

A. Yes.

Q. They are steel billets, I take it?

A. Yes.

Q. From whom have you bought your billets during the last ten years?

A. The Jones & Laughlin Steel Company.

Q. Where did you buy them prior to that time?

A. The Carnegie Steel Company.

Q. For how long a time?

A. Oh, I think ever since I have used them, previous to that.

Q. Is this ten years exact or approximate, that you have bought them from Jones & Laughlin?

A. Yes, about that.

Q. Have you or not bought them on a competitive basis?

A. We buy them on a competitive basis.

Q. How?

A. By asking for quotations from both of those companies.

Q. Have you confined your requests for quotations to those two companies?

A. I think so.

Q. Do you buy from time to time as you need billets, or under yearly contracts?

A. We generally buy on what we consider yearly contracts; about enough to last us a year.

Q. Do you buy them all at once or for delivery throughout the period?

A. We give a contract for delivery as we specify.

Q. Have you been asking for quotations regularly as you have contemplated purchases during that ten years, from both of these concerns?

A. Yes.

Q. Have their quotations been the same or variant?

A. They vary.

Q. Have they during the whole period?

A. Yes.

Q. How is it that you have made the actual purchases from Jones & Laughlin?

A. Because I could buy them cheaper.

Q. That is, their quotations were lower?

A. Yes.

Q. Did anything else ever enter your determination of the purchase than price?

A. No, sir.

Q. So that you have bought absolutely on the lowest bid?

A. Yes.

Q. Where have you sold the axles?

A. Greater New York and in the Eastern States, New York State and all over.

Q. Have you competed with any of the steel manufacturers in the sale of your axles?

A. No, sir; they do not manufacture.

Q. Have you competed with any other steel manufacturers in the sale of your rounds and squares and flats?

A. Yes.

Q. With whom?

A. I presume all the steel manufacturers; Jones & Laughlin, Carnegie; in fact, all of them who come into this market.

Q. And do they all come into this market?

A. Yes, sir, I think they do. Cambria and a number of them.

Q. Has there not been an active market in Greater New York during the period of ten years last past?

A. There has been; yes, sir.

Q. In these articles?

A. There have been active markets, and there have been very sluggish markets during that period.

Q. Could you tell approximately how many manufacturers have been selling these articles?

MR. DICKINSON: Which articles? Do you mean the rods?

MR. LINDABURY: The rounds, squares and flats.

MR. DICKINSON: What do you mean by rounds, squares and flats?

THE WITNESS: Round iron, square iron, and flat iron; anything that is flat, say, two inches wide and half an inch thick.

MR. DICKINSON: And you call all those "rods"?

THE WITNESS: And they are all called "rods," or bars, rather. I would rather say they are called "bars" than "rods." Rods are generally supposed to be rounds or squares.

By MR. LINDABURY:

Q. Now, after this explanation in answer to Judge Dickinson, tell me, if you can, approximately how many manufacturers have been in this market for the sale of these rods, during the last ten years?

A. Well, I presume there must have, at least, been fifteen to twenty manufacturers who have come to the New York market trying to sell their products.

Q. In the sale of your production, have you come in contact with any of the subsidiaries of the United States Steel Corporation?

A. I have, with the Carnegie Steel Company, yes.

Q. Have they a trade in this locality in those articles?

A. Yes, sir, a large trade.

Q. And what others have?

A. Why, Cambria, Jones & Laughlin, and this steel company—independent steel company here on Staten Island. I have forgotten their name now.

Q. And others? I will not ask you the names.

A. Yes; and others. A number of other smaller mills.

Q. Do you sell to the customers of the Carnegie Company?

A. We do.

Q. And do they sell to yours?

A. Yes.

Q. And is that the case with Jones & Laughlin?

A. Yes, sir.

Q. Is there any recognition in that respect of the rights of any one manufacturer to a line or class of customers?

A. No, sir.

Q. Do you make any difference in canvassing your products, whether the party canvassed or sold to has been a customer in the past of one or another of your competitors?

A. No, sir.

Q. Or do they as to yourself, so far as you know?

A. No, sir; not that I know of.

Q. And has there been, during this period of ten years any combination, agreement, or understanding, between you and these other steel manufacturers as to the price of rods, whether rounds or squares or flats, at any time?

A. No, sir.

Q. In the territory in which you have sold?

A. No, sir.

Q. Has there been, so far as you know, any uniformity between them, or between them and you, in the prices quoted in this market?

A. No, sir.

Q. For these things?

A. No, sir.

Q. Are these standard products?

A. Yes, sir.

Q. What you call standard products?

A. Yes, sir.

Q. Are they sold close or not?

A. Sold on small margin.

Q. And has that been the case during the ten years—for I am inquiring always of that whole period?

A. Yes, sir. Of course it varies a great deal with the demand. Sometimes there is a large demand, and then we get a better profit, and when the demand is poor, we have to sacrifice profits.

Q. What has been the practice of the Carnegie Company in this market with regard to the asking price in dull times or in flush times?

MR. DICKINSON: That is objected to because the witness has not shown that he is intimately acquainted with the sales and dealings of the Carnegie Company in such a way as to qualify him to answer that question.

THE WITNESS: Well, Judge, in reply to that——

MR. DICKINSON: (Interposing) You do not need to argue with me. The objection is on the record.

THE WITNESS: Oh, I beg your pardon; simply that every man who is in the rolling mill busines has got to be a judge and keep himself posted on the trade journals, which always give the prices and what is going on.

By MR. LINDABURY:

Q. Yes.

A. And a man who is not more or less of an expert on prices and conditions would never be able to run a rolling mill.

Q. You have kept yourself informed as to your business pretty generally, have you not?

A. Absolutely.

Q. You attend to it personally, do you?

A. I give it my personal attention, and I watch all the market quotations for everything.

Q. I think you were for one period Mayor of Brooklyn, were you not?

A. Yes, sir.

Q. When was that?

A. Let me see. About twenty years ago. 1895, I think.

Q. Excepting that, have you given your whole time and attention to your business?

A. Yes, and when I was Mayor of Brooklyn I used to give it part of my time each morning.

Q. You may now answer me as to the practice of the Carnegie Company, if it differed from the practice of the other manufacturers when times were particularly flush or particularly dull.

MR. DICKINSON: The objection is renewed.

MR. LINDABURY: After all that qualification?

MR. DICKINSON: Yes.

MR. LINDABURY: Go on.

THE WITNESS: Do you want me to answer the question?

MR. LINDABURY: Yes.

THE WITNESS: Why, it is just about like this: When times are good, or we get what we call a little sort of a steel boom, as a general thing you will find the Carnegie Steel Company on their products will have a fixed price, and you can always buy it at that price. They seem to nail a price or have a fixed standard price at which they will take your orders, and it is then that all the independents will advance their prices, and you cannot buy from the independents at that time as cheaply as you can from the Carnegie Steel Company. Now, on the other hand, when business is bad, and orders are very few, the Carnegie Steel Company, I notice in my experience, will try and maintain or do maintain their prices, and the independents are the first ones to cut prices, and that is the time you can buy cheaper from the independents.

By MR. LINDABURY:

Q. Yes.

A. The Carnegie Company, I have noticed, have always maintained a regular price, while the others have taken advantage of the boom and made you pay great big prices.

Q. Do you mean that this regular price you are speaking about has been an unchanging price year after year?

A. Year after year, that they would publish on their goods.

Q. You mean it did not change, year in and year out?

A. I have known it to last a year. I think it has lasted,

this present price that they are asking, a year; and yet to-day I can buy cheaper from independents than from the Carnegie Steel Company, simply because business is poor.

Q. Has there been any time when there was conformity to the price by the independents generally?

A. I could not say as to that. I think there has always been a little difference, dependent entirely on orders, and the state of the order books.

Q. And what they could get?

A. And what they could get, yes, sir. I know them to have asked outrageous prices, the independents have, a great deal higher than you could place orders with Carnegie. Deliveries had something to do with it.

CROSS EXAMINATION

By Mr. Dickinson:

Q. The Carnegie Company seems to have been a sort of fixed standard, about which the others oscillated according to conditions of the market?

A. When, as I say, there was a large demand for steel, the independents would advance prices above the prices of the Carnegie Steel Company, and when there was a very little demand, they seemed to want orders, and they would come down below the Carnegie Steel Company's price.

Q. Suppose trade was in a normal condition, where there was not any special advance or any special sluggishness?

A. I would not know, then, whether there was any uniformity of price; but I believe, to the best of my knowledge, there always has been a variety of price between the independents and the Carnegie Steel Company, and among a number of the other mills.

Q. The Carnegie Steel Company, then, has been a sort of standard to which they have worked, up or down, according to conditions?

A. I really could not answer that, except, being a very large company, they naturally would look at their prices and govern themselves by them, I should imagine.

Q. Your understanding is that the Carnegie Company have always sold at these published prices?

A. I believe the Carnegie Company would establish a price, and I think they would stick to that price, and it would make no difference whether business was good or whether it was bad.

Q. What kind of commodities are you talking of?

A. I am talking now of what we call merchant steel bars. I know nothing of anything outside of that. That is not in my line, Judge.

Q. These bars that they sold were steel bars?

A. Steel bars, billets, yes.

Q. Did you make any iron bars?

A. We make our iron bars; we buy steel bars or billets.

Q. You buy steel bars or billets and make your iron bars?

A. Yes, sir.

Q. Are these bars that you have described as squares and flats, which you sell, iron or steel?

A. The ones we sell are all iron.

Q. They are all iron?

A. Yes; they have got some steel in them.

Q. But they are classed in the market as iron?

A. Yes.

Q. To what extent in the year 1911 did you sell those iron bars?

A. You mean about how many tons we sold?

Q. Yes.

A. Between three and four thousand tons.

Q. The entire year?

A. Between three and four thousand tons; yes. We have a small rolling mill.

Q. During that year was the Carnegie Company selling iron bars?

A. No; I do not know as they make iron bars.

Q. You do not know that they make them?

A. No; but they were both in competition; the same thing.

Q. That is to say, your iron bars are in competition with their steel bars?

A. Yes; and they take in the trade steel or iron, either.

Q. I understand; but the price quoted for steel would not apply to the price quoted for iron, would it?

A. They are about the same thing in the market.

Q. Is there no choice between iron and steel?

A. None whatever in some things.

Q. In some things?

A. In this line of work there is no choice; a man would just as lief have steel as iron, and just as lief have iron as steel. The stores buy one and then buy the other, and do not care what they happen to get.

Q. They can be put to the same uses?

A. Yes.

Q. And therefore they are in competition with each other?

A. Yes.

Q. The iron bars and the steel bars?

A. Yes, sir.

Q. Do you know whether the Carnegie Company sold any iron bars in 1911?

A. I do not know as they have. I do not know as they make any iron bars.

Q. Do you know the names of people, of your own knowledge, to whom the Carnegie Company in the year 1911 sold square and flat bars?

A. Yes, sir.

Q. Mention some of them.

A. T. W. Kiley, of Brooklyn; Joseph Ruppert, of Brooklyn; N. Langler & Son, of Brooklyn; Froment & Company, of New York, and Vought & Williams. I cannot recall more. There are two or three others.

Q. I call your attention to the form of my question, which was whether you knew of your own knowledge; and I ask you whether or not this information that you have just given in answer to that question is not based upon hearsay.

A. No. I know that some of these people have told me that they buy from Carnegie.

Q. You think that is not hearsay?

A. If a man who does the buying tells me he does buy from Carnegie, I should think that is pretty nearly straight goods.

Q. But that is what you base your answer on, is it?

A. Yes, sir.

Q. On what the other people told you?

A. The man that does the buying in the house, yes. If he tells me he is buying steel from Carnegie, I believe he is.

Q. That is all the information you have, when you answer that question?

A. That is all I had, yes—the man that bought the goods told me he did.

Q. Were there periods during this time within the last ten years, when there were no special disturbing conditions in the market one way or the other, where prices continued over considerable periods, weeks and months, for steel bars, and where they were generally the same to the trade?

A. I do not think, Judge, there ever was a time in the last ten years where there was absolute uniformity in the price of either steel or iron bars. Somebody or other would charge more, or somebody would charge less.

Q. You mean to say there were some people who did not conform to a price that was accepted as or understood to be the general price?

A. Known as the market price.

Q. Known as the market price?

A. Yes.

Q. How about the larger manufacturers during those periods?

A. I do not know; I could not recall positively, but I know in reading, which I take my information from, the Iron Age, that gives the market price of iron materials, and I judge from that. Then it will go on to say that some independents are selling at higher than those, and some are selling lower than those.

Q. Generally that was the price that prevailed?

A. It was supposed to be the market price that prevailed.

Q. And at which the large manufacturers sold?

A. I presume that is what it meant to say. I get the quotations just the same as you get the market price on potatoes and apples. The papers give the market prices of potatoes, apples and flour.

Q. But wasn't it accepted by people in your line of business as the actual prevailing market price?

A. These quotations, yes.

Q. And that any individual sales were a departure from that under the same general conditions?

MR. LINDABURY: He has not said that.

MR. DICKINSON: Well, I am asking him that.

THE WITNESS: No, I do not think there has been any departure from any special conditions. Some of them thought steel was worth more and asked more for it, and others perhaps wanted orders, and they would sell for a lower price.

By MR. DICKINSON:

Q. But those were the prevailing prices, the prices that prevailed for a long time?

MR. LINDABURY: He has not said that.

MR. DICKINSON: Well, I am asking him that.

THE WITNESS: I do not think those prices were prevailing for any great length of time. That may have gone on for one or two or three months or something like that, the prices quoted by the Iron Age, which is gospel among the iron men.

By MR. DICKINSON:

Q. What do you mean by saying that it is gospel among the iron men?

A. I mean that I would take it for granted, as the established market price; everybody knows that the Iron Age is an iron paper; it is quoted by all the daily papers, if you remember. It says, "The Iron Age says so and so."

Q. And you take it for granted that that means something?

A. I take it for granted that that means something, being a very old paper, and it goes to a great deal of trouble in ascertaining the truth about prices.

Q. And it gives them for a long time as constant prices, and if it records changes you take it for granted that that describes the market?

A. Yes. I take it for granted that that describes the condition of the market.

Q. The prices at which sales took place and how the business was carried on?

A. Yes; that is my understanding.

Q. That is your understanding?

A. My understanding is that they are quotations of the market price, yes.

Q. And were their quotations the Carnegie Company's quotations?

A. I do not know whose they were.

Q. You do not know how that was?

A. No, sir; I have no idea about it.

Q. Have you seen the Carnegie quotations?

A. I have never seen the Carnegie quotations, except when we asked them for the price of anything. I do not know that they print their quotations.

Q. You mean that you have not seen any published quotations of theirs, is that what you mean by that?

A. Yes, sir.

Q. And you make no public quotations in your business?

A. No, sir. When I say quotations, I mean we will send out a price once a month; for instance, if there is any change in price, we will send to our customers a list of the new prices or the reductions, whichever it may be.

Q. Speaking of your business, how long, speaking broadly, would those prices that you have maintained continue?

A. I do not remember, I do not remember of ever having the same price for more than two or three months.

Q. But you have done that, have you?

A. I presume there have been times when for a couple of months our prices have been the same, but they almost always change, either a little higher or a little lower.

Q. And you cannot come any nearer to it, as to when those changes occurred, or the periods over which this constant price lasted?

A. No, I cannot give any. I know we advanced our prices about a year ago, and they have been up and down. They are very much lower now than they were a year ago.

Q. I understood you to refer to the Carnegie prices and others, as occasions came up from time to time, and that they would sell above or below. What do you mean by Carnegie prices in that connection?

A. We would want to buy, for instance, some square edged

axle billets, and we would write them for quotations or telephone them for quotations, and they would give us the quotations on them.

Q. That is, when you were about to sell?

A. No, when we were about to buy steel axle billets.

Q. I am speaking about when you were selling; did you know their prices?

A. I did not know their prices. I knew the market price of iron and steel.

Q. But when you spoke of independents, and the Carnegie prices being constant regardless of market conditions changing, and of the independents going out and getting a lower price at times, or going into the market and selling at a lower price, upon what did you base your statement as to the Carnegie prices?

A. From the fact that we would from time to time ask them their prices; we would want to purchase something, and we would find out what they were selling at, and then I would read the Iron Age and I would find the market price of the Iron Age would be so much, and I would read also the prices of the independents, and the prices they were asking would be about one-tenth to two-tenths of a cent per pound higher. Then again, for instance like now, I read that the independents are selling at a less price than the Carnegie Steel Company are selling at.

Q. What do you mean by independents?

A. Why, I mean all the other rolling mills. Jones & Laughlin—of course by independents I suppose you mean——

Q. (Interposing) No, I want to know what you mean.

A. I would take it for granted that independents meant everything outside of the United States Steel Corporation.

Q. That is what you mean by the use of that term?

A. By "independents," yes. It takes in all the little rolling mills and about everybody else.

Q. And as to the sales by independents, selling above or below, was that the price that you referred to when you spoke of the independents selling above or below the Carnegie price?

A. That is what I supposed to be the market price as printed in the Iron Age.

Q. And then you assumed that that was the Carnegie price?

A. Not necessarily; I did not assume it was the Carnegie price.

Q. Then, what price did you have in your mind?

A. The market price, as quoted by this iron journal.

Q. And when you spoke on your direct examination of sales being above or below the Carnegie price, you meant above or below the market price as quoted in the journal?

A. What I had reference to in my testimony on direct examination was that I referred to purchases by myself; I referred to purchases from Jones & Laughlin and the Carnegie Steel Company.

Q. But now I am asking you about sales. I mean all such things as you made sales of, and of which Carnegie made similar sales, like bars; where you referred to the sales above or below the prices at which they sold these things, in your direct testimony.

A. Not decidedly so, because I do know the Carnegie price to-day on bars, and I know that I can buy bars from other manufacturers at less than the Carnegie Company's present price on bars.

Q. That is not answering my question. When you spoke on your direct examination of the Carnegie prices at which they were selling, and the prices of those who were selling above or below, on what basis were you stating your knowledge as to the Carnegie prices? I just want to get what you are referring to.

A. The basis of the price that Carnegie was selling about that time.

Q. At about that particular time?

A. Yes.

Q. On things that you bought?

A. Things that I bought, and things that I sold.

Q. Would you call up the Carnegie Company and find out its price, and the prices of those selling the same things against them?

A. We would often call them up and ask what they would sell us for. For instance, we buy steel bars, I might tell you, these small sizes, and we would ask them for the prices of

their bars and they would give them to us. Now, the same price governs small bars that we do not make, as it does the prices of bars that we do make, the difference being a regular classified differential as to the sizes known by the trade.

Q. Then, for the purpose of finding out the Carnegie prices, the selling price of the things you were going to sell, you would call them up to see what they would sell you for?

A. No, we buy quite a quantity of small bars which we do not make, and from time to time we call up or we write, and ask at what price they would sell us, for instance, a carload of bars. We do that in good faith, and we would buy them from Carnegie if he was the lowest, and if not, we would buy from somebody else, which we are doing at the present time.

Q. On the basis of that knowledge, was your statement made that the sales of independents were less than the prices that Carnegie were obtaining?

A. At times, yes, and they are to-day.

Q. And you only base that on the particular quotations that Carnegie made to you, and not upon any of their published prices, or what they might have been selling to other people at?

A. It is based on the prices they are charging for bars, the prices that I know of.

Q. At which they sold them to you?

A. Yes.

Q. And you do not mean to say that you know they did not sell to other people at a different price from that at which they sold to you?

A. No, sir; on the general principle that I do not believe that the Carnegie Steel Company has got two prices.

Q. That is a general principle and a belief?

A. It is a belief from being in the business myself, and having purchased from Carnegie for the last fifteen or twenty years. I do not think they would make a price to me different from that which they would make to my neighbor. That has been their principle in business.

Q. But you do not know at what they have sold to your competitors?

A. No, sir.

Q. You have not seen their books?

A. No.

Q. And you do not pretend to speak with knowledge as to what the actual facts are?

A. Except that if you know a concern, and know that it does business in a proper way, treating all its customers alike, you would naturally think that they treated you as they did the others.

Q. But if you say that they did treat you all alike, that assumes knowledge, does it not?

A. Yes.

Q. But you do not know, do you?

A. No.

Q. What percentage of your sales per annum in tonnage are outside of the State of New York?

A. Why, oh, it is not one per cent., Judge.

Q. I do not know whether I asked you what your tonnage per annum in bars was.

A. Between three and four thousand tons.

Q. And how much in axle work?

A. In axles?

Q. Yes.

A. We manufacture somewhere in the neighborhood of 1,000 tons.

Q. How much?

A. 1,000 tons.

Q. I understood you to say, Mr. Wurster—and if I am wrong, please correct me—that for the last eight or ten years you have bought entirely from——

A. (Interposing) From Jones & Laughlin.

Q. From Jones & Laughlin?

A. All our axle billets, yes.

MR. LINDABURY: He did not say "eight or ten years;" he said "about ten years."

MR. DICKINSON: Well, make that read "about ten years." He first said "ten," and afterwards he put in "about."

MR. LINDABURY: Yes.

By Mr. Dickinson:

Q. When did you last solicit a bid from the Carnegie Company on axle billets?

A. On axle billets?

Q. Yes.

A. Oh, I think it was about a year ago.

Q. And how long previous to that?

A. Oh, I think every year, before we make our contracts, I ask for a bid.

Q. And you never solicited anyone except the Carnegie Company and Jones & Laughlin?

A. I think that was all on axle billets.

Q. That is what you stated, I believe.

A. Yes, sir.

Q. And during that period the price of Jones & Laughlin was constantly below the Carnegie, was it?

A. For about ten years; yes, sir.

Q. And still you went on soliciting bids from Carnegie, in competition with Jones & Laughlin, and never asked any other competitor of Jones & Laughlin to give you a bid?

A. I have never asked any one else. I did not know any one else that made those axle billets. I think they are about the only two concerns I know of that make them, if I am not mistaken. Our competitors in the axle business all buy either from one or the other.

Q. You do not know of any one else, then, that makes those?

A. I do not know of any one else, no. I think they make the largest majority that are used.

Q. The majority, you mean?

A. I mean I guess they make most all of the axle billets that are used in the United States.

Q. From whom have you been buying your bars in the last ten years?

A. In the last ten years we have been buying some from Carnegie and some from the Rockaway Rolling Mill, some from Nicetown, and one or two others; I cannot remember the names.

Q. Do you know the comparative output of Carnegie and Jones & Laughlin of this particular specialty of axle billets?

A. No, I do not.

Q. Do you know which is the larger producer?

A. I do not know; no, sir.

Q. Did you not say that you got quotations on bars from Carnegie about once a year, for the last ten years?

A. No, that was axle rods.

Q. How about bars?

A. Why, whenever I would need a carload of bars or angles, I would call them up and find out their price, and I would write to other out-of-town people—Rockaway and Nicetown, and Jones & Laughlin.

Q. Did you buy any bars from the Carnegie Company in 1911?

A. I do not think we did. We bought angles from them; we bought angles this year.

MR. DICKINSON: That is all.

RE-DIRECT EXAMINATION

By MR. LINDABURY:

Q. What proportion or percentage of your bars and angles have you bought from Carnegie during the ten years?

A. Why, I think I have only bought angles from Carnegie in the last two or three years. Previous to that I think I bought them from Jones & Laughlin and from Rockaway, and I bought bars from Nicetown, Rockaway and Boonton, New Jersey, wherever I could buy them cheapest.

Q. Did you buy any bars from Carnegie during the ten years?

A. I may have bought some.

Q. But not many?

A. No, I do not think we purchased many bars.

Q. Now, taking it altogether, have you bought as much as ten per cent. of your supply of bars and angles from Carnegie in the last ten years?

A. Yes, I presume so.

Q. As much as 25 per cent.?

A. Yes, I should think from 10 to 25 per cent.

Q. Why did you buy so much the larger percentage from the others?

A. Because I could buy them cheaper.

Q. For no other reason?

A. No, sir.

Q. And on quotations did you buy them?

A. Yes, sir.

Q. There was no inferiority in the Carnegie production?

A. No, sir; they were rather better.

Q. No poorer service, was there?

A. No, sir.

Q. It was simply a matter of price?

A. A matter of price.

Q. Now, in quoting your rods, whether rounds or squares or flats, did you adhere to this published trade price—the Iron Age price—in your quotations?

A. We were governed largely by it.

Q. You looked to it, but did you follow it and quote only that price?

A. No, we would sometimes sell it for more, and sometimes a little less.

Q. Do you know anybody among your competitors who did not do the same thing?

A. I believe that is the way business is generally done. It depends largely on the state of your business and how much you need orders.

Q. It was a guide, then?

A. Yes, sir.

Q. Was it anything more?

A. No.

MR. LINDABURY: That is all.

MR. DICKINSON: That is all.

WARREN N. HALLETT

was called as a witness on behalf of the defendants, and being first duly sworn, testified as follows:

DIRECT EXAMINATION

By Mr. Reed:

Q. What is your occupation?

A. I am superintendent of supplies and purchasing agent of the Postal Telegraph & Cable Company.

Q. Your home is in New York?

A. Yes, sir.

Q. How long have you been in the supply department of the Postal Telegraph & Cable Company?

A. I have been there twenty years.

Q. Prior to being superintendent what was your position?

A. I was chief clerk there for ten years.

Q. Throughout that time have you been familiar with the purchases made and the prices paid for the supplies of the Postal Company?

A. Yes, sir.

Q. That has been directly under your charge, has it?

A. Under my charge, yes, sir.

Q. Does your company purchase any steel supplies of any kind?

A. We purchase no steel supplies. We purchase iron telegraph wire.

Q. Do you purchase any wire strand?

A. We purchase wire strand rope, what we call Siemens-Martin strand.

Q. Is that made of steel or of iron? It is a steel or iron product, is it not?

A. It is either a steel or an iron product; I believe it is iron.

Q. About what quantity of telegraph wire do you purchase each year?

A. Our average is about 5,000 tons per year.

Q. And about what quantity of this galvanized strand do you purchase each year?

A. From one million to a million and a quarter feet per year.

Q. The plain wire is used for telegraph lines, is it?

A. It is.

Q. What is this wire strand used for?

A. Principally for guying telegraph poles and for suspending cables.

Q. What is known as messenger wires?

A. What we call messenger wires.

Q. In your purchase of plain telegraph wire do you require wire of any exceptional quality?

A. It must be of an exceptional quality.

Q. Is that as to strength?

A. As to strength, conductivity, and also the galvanizing.

Q. All must be good?

A. All must be good.

Q. Is ordinary, plain galvanized wire sufficient for your purpose?

A. It is not, no sir.

Q. When you are about to make a purchase of plain wire, from what sources do you ask quotations?

A. The American Electrical Works, John A. Roebling's Sons, and the American Steel & Wire Company.

Q. How do you ask quotations? By letter or telephone? What is your usual practice?

A. Sometimes by letter and sometimes by telephone.

Q. Which is the usual practice?

A. For iron wires usually by telephone.

Q. How long has that been your custom?

A. That has been our custom for a great many years.

Q. During that time have the quotations that have been received by you been the same or have they varied?

A. No; the quotations always varied.

Q. Among these different concerns?

A. Among the different concerns.

Q. How long has that been the case, Mr. Hallett?

A. At least for the last ten or twelve years, and I believe prior to that, but I know for the last ten or twelve years.

Q. That is, since you have been chief clerk?

A. Since I have been chief clerk and purchasing agent.

Q. Those quotations have come under your knowledge, have they?

A. Yes, sir.

Q. And you have personal knowledge of them?

A. Yes.

Q. How about this strand wire?

A. There are about five concerns in the country today that make a wire fit for our purpose.

Q. What are they?

A. They are the three first mentioned and the Hazard Manufacturing Company and the McCumber-White Company of Chicago.

Q. Do you ask quotations from all of these concerns?

A. We ask quotations from all of these concerns.

Q. On wire strand?

A. On wire strand.

Q. How about the quotations that you receive on wire strand in response to any particular request; are those the same or do they vary?

A. They always vary.

Q. How long has that been the case?

A. For the same length of time.

Q. Is any particular concern of these you have named uniformly the lowest?

A. No.

Q. Does that vary from time to time?

A. That varies from time to time.

Q. What is your practice in letting the contract, Mr. Hallett?

A. We usually buy on contract, either specifying a certain number of pounds for the telegraph wire or a certain number of feet for the strand wire.

Q. Do you let your whole annual requirement to one manufacturer?

A. We do not.

Q. What is your custom as to that?

A. We usually divide our business amongst the three largest manufacturers, and in strand wire amongst the five.

Q. What is your purpose in doing that?

A. We are a public service corporation, depending upon the public for our revenue, and we do not think it is wise for a company like ours to confine themselves to one individual.

Q. At what prices do you divide up this contract?

A. We always buy at the lowest price.

Q. The lowest of all the quotations?

A. The lowest of all the quotations.

Q. Do you find that all these concerns are always willing to meet that lowest price?

A. They are not. No one man is always low.

MR. DICKINSON: I do not understand the question.

MR. REED: I think perhaps the witness did not.

By MR. REED:

Q. Do you find that those who are the highest bidders are always willing to come down to the lowest price in order to get a share of the contract?

A. Not always.

Q. And in that case what do you do?

A. In that case we buy from the lowest bidder.

Q. And leave out the other one?

A. We always buy from the lowest party.

Q. In addition to these concerns you have named, has your company's trade been solicited by other manufacturers?

A. It only has for the last year or year and a half; then there were two new concerns, one of which was the Page Woven Wire Fence Company.

Q. What was the other?

A. The other was either the Illinois Steel Company or the Indiana Steel Company; I cannot be sure of the name.

Q. How about the Pittsburgh Steel Company?

A. The Pittsburgh Steel Company; that will make three.

Q. Have you asked quotations of these new aspirants for your business?

A. We have not.

Q. If not, why not?

A. I did not feel satisfied that they were equipped to make a wire suitable for our purposes.

Q. Then, if I have understood you correctly, every concern that makes plain wire cannot make wire as good as that which you require? Is that correct?

A. I will not say that they cannot; I will say that they do not.

CROSS EXAMINATION

By Mr. Dickinson:

Q. Mr. Hallett, you stated that for a certain class of these purchases you usually solicited by telephone. What class did that apply to?

A. It applied to the iron wire and to the iron strand wire.

Q. Does that cover the whole of these purchases?

A. It covers all of those purchases.

Q. I mean, of all that you have included in your testimony?

A. It includes all of that. We sometimes ask prices by telephone, and sometimes with our regular printed quotation blanks.

Q. Some of these makers have factories near New York and some at distances, do they not?

A. There are none in New York. There is one at Trenton, one at Worcester, one at Providence and one at Waukegan, Illinois.

Q. Who sold this product made at Waukegan, Illinois?

A. The Waukegan and Worcester plants are those of the American Steel & Wire Company. The Trenton plant is the Roebling plant. The Providence plant is the American Electrical Works.

Q. In getting bids from the Roeblings, from whom did you solicit bids?

A. Through their New York office.

Q. And for the American Steel & Wire Company?

A. Through their New York office.

Q. So you telephoned right here in the city, then?

A. Right in the city, yes, sir.

Q. None of these solicitations were by written letter?

A. Sometimes we sent out and asked for written quotations.

Q. In the year 1911 how many tons did you buy respectively, of these different kinds of commodities?

A. I do not believe that our requirements have varied for the last four or five years beyond what I stated. Our normal supply of telegraph wire, which is known as plain wire, is about 5,000 tons per year.

Q. You gave that; but as to the other?

A. The strand wire, I should say, about 1,000,000 feet.

Q. A million and a quarter feet, I think you told us.

A. A million and a quarter feet. It might drop as low as 750,000 feet, or it might go to a million and a quarter, but would be within those two amounts.

Q. For the year 1911, take the telephone wire: To whom was that bid awarded and in what proportions?

A. I buy on contracts, not for a year's supply.

Q. Oh!

A. I divide the business amongst the various manufacturers, depending entirely on the price.

Q. Yes; I believe you said that. Now, for the year 1911——

A. How was it divided?

Q. Yes.

A. I would say perhaps 50 per cent. with the Roeblings and about 25 per cent. with the American Steel & Wire Company and 25 per cent. with the American Electrical Works. That is partly guess work.

Q. Fifty per cent. Roebling and 25 per cent. American Steel & Wire Company?

A. Fifty per cent. Roebling and 25 per cent. American Steel & Wire.

Q. Where was the other 25?

A. The other 25, the American Electrical Works.

Q. How about strand wire for that year?

A. Well, you might put it down on the same proportion.

Q. That covered a number of different contracts for that year?

A. It covered a number of different contracts. Our contracts are usually made on iron wire from 150,000 to 250,000 pounds, and on the strand wire from 125,000 to 250,000 feet.

Q. Now, you state that those bids varied on each contract?

A. The bids varied.

Q. But in awarding, you awarded on the lowest price and divided the contract, unless there were some who were not willing to take the lowest price?

A. That is right.

Q. Take the year 1910, can you state that at any time in that year any of these declined, on account of the price, to participate in that division? If so, give us the nearest information you can on that.

A. Our contracts are usually about every three or four months, perhaps, and sometimes a man who refuses to take a contract on in June, might accept one in October.

Q. You had several contracts for the year 1911?

A. Yes, sir.

Q. I want to know if, during the year 1911, under any of these contracts any of these bidders declined to participate. If so, state what bidder did, and if there were more than one, state who they were.

A. I can not tell that, because I had contracts in that year with all three of those people at certain prices. Now, it might be that during that year either one of those three might have refused to take on a new contract.

Q. You spoke of three furnishing the telephone wire; and were there not more than three who furnished the strand wire?

A. Yes, there were; there may have been four that furnished strand wire. I can not tell except by referring to my records. I recognize five concerns in the strand wire business, and three at present in the telephone wire business.

Q. In 1911 how many were there in the strand business?

A. The same number, and those firms are still in existence, and were at that time.

Q. So that you dealt with three and five respectively in the year 1911?

A. Yes.

Q. You stated that on the telephone wire you gave Roebling 50 per cent., about; the American Steel & Wire Company about 25, and the American Electric Company about 25

per cent. I also understood you to say that on the strand contracts of that year you divided in about the same proportion, but that could not be if there were five participants.

A. I said there were five bidders, but perhaps there were not five from whom we purchased.

Q. I am asking to know whether or not during the year 1911 there were any of those competitors on any of these commodities that did not participate, on account of an unwillingness to meet the price?

A. I do not think we bought from any in the year 1911 except from Roebling, the American Steel & Wire Company and the American Electric Works. We might have had one contract with Hazard, but I am not sure, and if it was, it would have been a very small one.

Q. Did that cover both classes of those commodities, the telephone wire and strand wire too?

A. It would cover both classes, with the exception that Hazard did not make iron wire, and never has made iron wire.

Q. He can make strand wire?

A. He can make strand wire.

Q. Could Roebling have supplied your entire demand under any contract at any period?

A. He could have supplied ten times what we required.

Q. Could the American Steel & Wire Company have done the same thing?

A. Yes, and the other concern too.

Q. But yet, when you solicited bids, you divided up the contract on the lowest price where they were willing to take the lowest price?

A. If they were willing to take the lowest price.

Q. Generally was it done that way?

A. Generally it was.

Q. And if the other occurred, it was an exceptional case, was it?

A. You mean if they refused to take it?

Q. Yes.

A. If they refused to take any on, they got no contract.

Q. I understand, but I want to know if those instances were

not very exceptional as compared with what usually took place.

A. There were many times when they would not meet my price.

Q. Can you mention a single time in the year 1911 when either one of these competitive bidders retired and refused to participate on account of the low price put in by a competitor?

A. Yes.

Q. Just state who it was and what it was and what contract.

A. That I can not do, because, as I told you, I made a contract for a certain amount; if I should make a contract the 1st of January for a certain amount of wire, and I ask three bidders and only one gets it, the other two must have retired. That might happen with me three or four times a year. I never let my contracts run out. Whenever they get low, I take on a new supply.

Q. Did that happen to you in the year 1911?

A. Yes.

Q. Did it happen more than once?

A. It must have happened every time I made a contract.

Q. You mean to say that every time you made a contract it must have happened that some of these competitive bidders refused to participate in their proportion on account of the lowness of the price?

A. Yes.

Q. And that did happen in 1911?

A. It happened in 1911.

Q. Well, now state which of these, and if there were more than one, state who they were, refused to participate in 1911.

A. I can not tell unless I refer to the contracts existing on my books.

Q. You have those contracts, have you?

A. Yes, I have.

Q. I will ask you to show what contracts you made in 1911, both in telephone wire and strand wire, and with what parties they were made. When we adjourn you can look up that information.

How about the year 1910? Can you say whether or not during the year 1910 any of them refused to participate?

A. I can not say, but the same condition has prevailed in our department for a number of years. We always have bought in the same way; we buy from the lowest bidder. If we ask three or four people to bid on a certain class of material, and one man takes it, the others must have been too high and must have dropped out.

If I want to buy 250,000 pounds of wire at a price, I get bids and I take the lowest man. If conditions prevail that I require a larger amount, I would divide that between two people who perhaps bid the same. I might offer another man a certain price, taking the lowest price as my guide in doing that.

Q. But where you solicited bids for any particular kinds of product, in a particular amount to be delivered within a particular period, and there were several bidders, and the prices varied, and you awarded the contract on the lowest price; as I understood you to say, you divided this contract between several bidders provided they would all agree to the lowest price?

A. No, I do not think I said I divided it.

Q. What did you say?

A. For instance if I ask a price on say 250,000 pounds of wire, and these people bid, and one man was low, and I thought that that low price was sufficiently low, I might offer one of my other mills to take on a certain amount at that price. He could take it if he wanted to, and if he didn't want to he need not.

Q. You do not mean to say, then, that where you solicited bids for a particular amount, and there was competition, and one of them bid lower than the others, that you divided the amount so solicited in that proposition between the bidders if they were willing to take it at that price?

A. No. I did not say that.

Q. And you did not mean to say that on your direct examination?

A. I did not intend to so state, no sir.

Q. What I understand you now to say is that where there

was competition and a difference in price, you always awarded it to the lowest bidder, and then outside and beyond that if you wanted more, and some of the others were willing to take it at that, you gave them an additional and separate contract; is that what you mean to say?

A. Yes.

Q. And that was all you meant to say on your direct examination?

A. That is all I meant to say.

Q. In soliciting these bids it often occurs that when the bids would come in on a certain amount, on the price bid by the lowest one you thereafter increased the amount and gave it to others if they wanted it; did that often occur?

A. Quite frequently.

Q. Quite frequently?

A. Yes.

Q. And you did not give it to the one who had made the lowest bid?

A. We always buy from the lowest bidder.

Q. I understand; on the bid.

A. But if I think that our normal requirements for a certain number of months are going to be higher than the amount I asked for in my quotations, I might take on another additional supply if I thought the price was low.

Q. And you gave that to one of these who lost in the competition, one or more of them?

A. If they wanted to take it.

Q. If they wanted to take it, and not to the one who had made the lowest bid?

A. If I receive a bid that is low on a certain amount of wire I place that with the lowest bid.

Q. I understand that.

A. Then if I want an additional amount, or think I can use a certain amount, or because I think the price is low, I offer it to one of the other two, usually the second bidder. If he takes it I send him a contract at the lowest price; if he doesn't take it I will offer it to the third party and give him a chance. If the two of them turn me down I offer it to the

original party, if he wants to take on a certain amount more. Sometimes they would do it and sometimes they would not.

Q. But you would always give the preference to the losing bidder before offering it to the first party who had made the lowest bid?

A. Always.

Q. Now, take the year 1911. Have you the various bids that were made? That is, have you got them tabulated for that year on the various contracts?

A. I have a copy of all our contracts. I might possibly locate some of the bids. I could not locate the telephone bids.

MR. REED: You say you cannot locate the telephone bids?

THE WITNESS: No. I have copies of the contracts dating back, I am pretty sure, as far as 1910.

MR. DICKINSON: Mr. Hallett, when I asked you to produce these contracts I totally misunderstood your direct examination, and in view of your explanation in your cross examination, why, I will not insist upon your producing them. That is all.

THE WITNESS: Well, I have a copy of the contracts on file.

MR. DICKINSON: I understand. I think your direct examination was susceptible of what I understood it to mean, but after the way in which you have explained on cross examination, it does not make it necessary for me to call for them. That is all.

REDIRECT EXAMINATION

By MR. REED:

Q. Mr. Hallett, in money, how much do the purchases of your department amount to each year?

A. You mean all the supplies I purchase?

Q. Yes.

A. From one to two million dollars.

MR. LINDABURY: You mean wire supplies?

MR. REED: No; I mean supplies of all kinds.

MR. DICKINSON: You mean, under these contracts?

MR. REED: I mean supplies of every kind for the Postal Company.

THE WITNESS: From one to two million dollars.

By MR. REED:

Q. That extends to a great many different classes of goods?

A. I carry in stock about 2,000 different items.

Q. You have been in that department for upwards of twenty years, I think you said?

A. I have been there for about twenty years.

Q. Do you know competition when you see it?

A. I ought to, when that is what I am paid for.

Q. During this period of which you have been speaking,—the past twelve years—has there been, so far as you have been able to observe, genuine, live competition for your business in telegraph wire and steel strand?

MR. DICKINSON: This is objected to because it calls for a mere conclusion of the witness, and it involves phrases and qualifications, the terms of which are not expressed or explained, nor has the witness shown that he is competent to answer the question as framed.

MR. REED: Will you read the question, Mr. Stenographer?

(The question was thereupon read by the stenographer.)

THE WITNESS: There has.

MR. REED: That is all.

MR. DICKINSON: That is all.

(Whereupon an adjournment was taken until Monday, October 20, 1913, at 10:30 o'clock a. m.)

NINETY-EIGHTH DAY.

EMPIRE BUILDING,
71 Broadway, New York City,

Monday, October 20, 1913.

Before Special Examiner JOHN ARTHUR BROWN.

Present on behalf of the United States, MR. DICKINSON and MR. COLTON.

Present on behalf of the Defendants, MR. LINDABURY, MR. SEVERANCE, MR. BOLLING and MR. REED.

MORTON W. REED

was called as a witness on behalf of the defendants, and being first duly sworn, testified as follows:

DIRECT EXAMINATION

By MR. SEVERANCE:

Q. Mr. Reed, where do you reside?

A. My home address?

Q. Yes.

A. Mount Vernon, New York.

Q. Where is your place of business?

A. 111 Fifth Avenue.

Q. What is your business?

A. Purchasing agent for the American Tobacco Company.

Q. How long have you been the purchasing agent of the American Tobacco Company?

A. Twelve years.

Q. Is there any difference in the scope of your work as purchasing agent of the American Tobacco Company now and previous to the judgment of dissolution of that combination, or whatever it may be called—I do not know the technical name?

A. None whatever, sir.

Q. You are still acting for the Tobacco Company?

A. For the American Tobacco Company.

Q. There are certain other companies, are there not, that were originally controlled by the Tobacco Company that are no longer controlled by it?

A. Yes.

Q. Do you act for them?

A. No, sir.

Q. What are the names of those other companies? I have not got them in mind.

A. Liggett & Myers Tobacco Company——

Q. Where are their headquarters?

A. Their headquarters are in St. Louis, with an office in New York.

P. Lorillard Company, Jersey City; R. J. Reynolds Tobacco Company, Winston-Salem, North Carolina.

Q. You formerly acted as purchasing agent or in some capacity you bought the supplies, did you, for those companies, in addition to the American Tobacco Company?

A. Yes, sir.

Q. And they have their own purchasing agents now, have they, since the dissolution, or they buy through their own people?

A. Yes. I should have put in there—if you will excuse me for a moment—we bought for what is known now as the American Snuff Company and Weyman-Bruten and George W. Helm Company. Those companies were taken out of the American Tobacco Company originally.

Q. Did you have, previous to the dissolution judgment, a separate corporation that made the purchases?

A. Yes, sir.

Q. What was the name of that corporation?

A. The Amsterdam Supply Company.

Q. What was your office in that company?

A. I was president.

Q. When you say that you are still buying for the American Tobacco Company, as you did before, do you mean that you bought directly for the American Tobacco Company be-

fore, or did you buy for this Amsterdam Supply Company, which supplied the Tobacco Company?

A. I mean that the Amsterdam Supply Company was the purchasing company for the American Tobacco Company and its subsidiaries.

Q. Is that company still in existence? The Amsterdam Supply Company?

A. No, sir; it is dissolved.

Q. It was dissolved?

A. Yes, sir.

Q. So your present position is that of purchasing agent of the American Tobacco Company?

A. Yes, sir.

Q. What in the way of steel products do you buy at the present time, as the purchasing agent of the American Tobacco Company, and what did you buy previous to the time the Amsterdam Supply Company was dissolved?

A. Tin plate mainly.

Q. From what different companies during the last eight or ten years have you bought tin plate?

A. The McKeesport Tin Plate Company; the Pope Tin Plate Company—I think that is the name——

Q. Let me ask you, is the Pope Tin Plate Company a concern out in Ohio that has some time recently been purchased by the Phillips Tin Plate Company?

A. Yes, sir; also from the Phillips Sheet & Tin Plate Company, and then from various brokers.

Q. Did you buy from the American Sheet & Tin Plate Company?

A. I beg pardon; from the American Sheet & Tin Plate Company; yes, sir.

Q. Did you buy any from Jones & Laughlin?

A. Yes, sir; from Jones & Laughlin.

Q. During that entire period that I have mentioned, say ten years last past, what has been the condition of the market for tin plate as to being a competitive market or otherwise?

MR. DICKINSON: Objected to as calling for a conclusion on the part of the witness.

MR. SEVERANCE: I will get the details.

THE WITNESS: It has been a vacillating one so far as prices are concerned, and so far as we are concerned, purely competitive.

By MR. SEVERANCE:

Q. What governs you and your corporation in the purchase of tin plate from these various companies, what considerations?

A. Quality and price, as well, of course, as ability to deliver.

Q. From which ones of these companies have you purchased the larger part of your supplies?

A. The McKeesport Tin Plate Company and the American Sheet & Tin Plate Company.

Q. I believe you said, after naming the list of mills, that you also bought from brokers?

A. Yes.

Q. In general, how did the prices compare, the prices you paid to brokers, compare with the prices that were then being quoted by the mills?

A. They were usually lower.

Q. What was the fact as to whether the different mills that you have mentioned, in seeking your business, quoted the same price at the same time? Did they do that, or did the prices quoted to you differ?

A. Some would be the same, some would be lower, and some would be higher.

Q. That is, there was no uniformity?

A. I never discovered any uniformity.

Q. You spoke of buying for the Snuff Company. Was there ever any time the Snuff Company preferred plate made by any particular manufacturer?

MR. DICKINSON: That is objected to as irrelevant.

THE WITNESS: Yes.

By MR. SEVERANCE:

Q. What manufacturer did they prefer?

A. The Pope Tin Plate Company.

Q. For what reason?

MR. DICKINSON: Objected to on the same grounds.

THE WITNESS: For the reason that they considered it better quality to fit their uses.

By MR. SEVERANCE:

Q. And did you or did you not purchase their supplies from the Pope Tin Plate Company for that reason?

A. I did at this period that I referred to as having bought from them.

Q. When was that? About how long ago?

A. I think that was in 1909 or 1910, perhaps, if I remember correctly.

Q. I think I forgot to ask you for what purpose these purchases of tin plate were made; what did you use them for?

A. Making tobacco boxes and snuff boxes of various kinds.

Q. Where were the factories located that used this tin plate?

A. Prior to the dissolution?

Q. Prior to the dissolution.

A. In Baltimore, St. Louis, Memphis, Chicago, Nashville, Tennessee, and Durham, North Carolina.

Q. At what place does the American Tobacco Company manufacture these receptacles now, since dissolution?

A. At Baltimore, Maryland.

Q. Only at Baltimore?

A. Yes.

Q. With whom did you contract, if any one, in 1910, for the 1911 delivery of the bulk of your requirements, if you did contract ahead?

A. We usually contract in the latter part of the year for the following season.

Q. That is what I had in mind; with whom did you contract in the latter part of 1910 for the 1911 supply?

A. I think it was the McKeesport Tin Plate Company.

Q. And what was it that led to giving that contract to the McKeesport Tin Plate Company?

MR. DICKINSON: Objected to as irrelevant and incompetent.

THE WITNESS: Well, of course we give no contracts to

anybody except on a competitive basis, and the lowest man gets the business with us, for tin plate or anything else.

By Mr. Severance:

Q. That was the governing factor, was it?

A. Yes.

Q. And the next year after that which company secured your business?

A. The American Sheet & Tin Plate Company.

Q. Had they been in competition for the 1911 business?

A. Yes.

Q. And McKeesport secured it?

A. Yes.

Q. The next year the Sheet & Tin Plate Company got it?

A. Yes.

Mr. Dickinson: What year was that?

Mr. Severance: They got the 1912 deliveries.

By Mr. Severance:

Q. Who secured the contract for 1913 deliveries?

A. The McKeesport Tin Plate Company.

Q. What were the annual requirements of the Amsterdam Supply Company in the way of tin plate?

A. They constantly increased; I should say beginning 1903 perhaps, we were using around 200,000 boxes a year. Up to the time of the dissolution of the Amsterdam Supply Company we were using perhaps 500,000 boxes. Since, it has grown so that I think in the next year there will be 750,000 boxes.

Mr. Dickinson: That was the American Tobacco Company?

The Witness: Yes.

By Mr. Severance:

Q. This business has increased so that the American Tobacco Company is using now more than all these companies did previous to the dissolution; is that right?

A. Yes, because the Tin Decorating Company of Balti-

more, Maryland—in explanation of that large figure—makes boxes under contract for the two or three companies that were dissolved.

Q. It is about 750,000 boxes, you say?

A. Yes, sir.

Q. And you got all your requirements this year from the McKeesport Company?

A. Practically all. I would say about all.

Q. Where are these brokers located from whom you bought at times?

A. New York, Baltimore and Chicago, if I remember correctly.

Q. Mr. P. A. B. Widener is, and for some time past has been, a director of your company, has he not?

A. I think he has, sir.

Q. Has Mr. Widener directly or indirectly ever made any suggestions to you as to the manufacturers from whom you should purchase your tin plate supplies?

A. No, sir.

Q. Has that matter been left to your discretion, the matter of purchase?

MR. DICKINSON: That is objected to as a conclusion.

THE WITNESS: Yes, sir.

By MR. SEVERANCE:

Q. Have you been governed by any consideration in making purchases, other than as you have heretofore testified?

A. No, sir.

MR. SEVERANCE: You may examine.

CROSS EXAMINATION

By MR. DICKINSON:

Q. Mr. Reed, how long have you been purchasing for this American Tobacco Company? What years?

A. I commenced September 1, 1901.

Q. No, no, the American Tobacco Company.

A. That was with the American Tobacco Company. The American Tobacco Company has never been changed.

Q. When was this Amsterdam Company formed?

A. I could not say positively, sir. I think about 1905.

Q. Then from 1901 to 1905 you purchased for the American Tobacco Company?

A. Yes, sir.

Q. And then after that you became the purchasing agent for the Amsterdam Company, which purchased for all of these companies that belonged to the American Tobacco Company?

A. Not just exactly that. The Amsterdam Supply Company was formed by the American Tobacco Company to do its purchasing, of which company I was president.

Q. I understand it did purchase for all its subsidiaries?

A. Yes.

Q. And to the time of that formation, which was in 1905, you purchased for the American Tobacco Company, and from that time on to the dissolution, you purchased for the Amsterdam Company?

A. No, we did not purchase anything for the Amsterdam Company. The Amsterdam Supply Company purchased for the American Tobacco Company and its subsidiaries.

Q. You purchased, though, didn't you, for the Amsterdam Company?

A. Yes, I was president of that.

Q. The purchases were contracted for in their name, were they not?

A. Yes, sir.

Q. Then you purchased for that company, didn't you?

A. No, not purchase for the company; that company purchased for the American Tobacco Company.

Q. In whose name were the contracts made?

A. The Amsterdam Company.

Q. Then if you made a purchase in that name, and you represented that company, didn't you purchase for that company?

A. We will say yes.

Q. I do not want you to say yes except if it is the fact. I just want you to tell me what it was.

A. Yes, sir.

Q. Then you continued to purchase for the Amsterdam Company up to the time of the dissolution?

A. Yes, sir.

Q. When was that?

A. That was the 1st of November, I think, 1911.

Q. The contract then, for 1911, for the subsidiaries of the American Tobacco Company was made in 1910, was it not?

A. In the latter part of 1910, yes, sir, I think it was.

Q. Before the dissolution?

A. Yes, sir.

Q. For 1911 what concern did you say got the contract——

A. (Interposing) 1911 deliveries?

Q. Yes.

A. McKeesport.

Q. McKeesport?

A. Yes.

Q. And that was for the American Tobacco Company?

A. Yes, sir.

Q. I mean that was for the Amsterdam Company?

A. I will say that of course all contracts existing at the time of the dissolution of the American Tobacco Company—we assumed the *pro rata* part of the various companies and they were carried out.

Q. You had nothing to do with that part of it?

A. I had nothing to do except just to figure out their proportionate parts.

Q. I understand your activities were confined to the question of purchasing for this company and making contracts and seeing to deliveries?

A. Yes, sir.

Q. That contract was made in the year 1910 for the year 1911?

A. Yes, sir.

Q. And was made for the Amsterdam Company, representing all the subsidiaries of the American Tobacco Company?

A. Yes.

Q. Now, where is that contract?

A. You mean the contract itself?

Q. Yes.

A. In my office.

Q. It is in your office?

A. Yes.

Q. Please produce it, will you?

A. Yes, sir.

Q. You can produce it later to-day?

A. Yes, sir.

Q. Was that contract let on bids?

A. Yes, sir. What do you mean by bids?

Q. I mean, did you send out in any written or printed form to any of the makers of the commodities that you were proposing to purchase, invitations to bid, in which you stated the character and quantity of the commodities that you wanted, and the deliveries?

A. No, sir.

Q. How?

A. No, sir; it was all done personally.

Q. It was all done personally?

A. Yes, sir.

Q. You took no written bids?

A. No, sir.

Q. For that year?

A. No, sir.

Q. Did you for any years?

A. No, sir.

Q. And you have nothing representing any proposals made by any other company?

A. No, except verbal conversations when they came to see me.

Q. Verbal conversations when they came to see you?

A. Or perhaps there might be a letter of invitation telling them we were going to discuss tin plate, and then they would come to see me.

Q. Did they come all together?

A. No, sir.

Q. They were private, were they not?

A. Yes, sir.

Q. What other companies bid for the supply for 1911?

A. The McKeesport and the American Sheet & Tin Plate Company.

Q. Any others?

A. No, sir.

Q. Did you solicit any others?

A. No, sir.

Q. What was the bid put in by the American Sheet & Tin Plate Company?

A. You mean the price?

Q. Yes.

A. I do not remember.

Q. What was the price put in by the McKeesport Company?

A. I don't remember.

Q. For the year 1912's supply that contract was made in the fall of 1911?

A. I cannot say when they were made. I cannot tell when they were made. I do not——

Q. Now, did you——

MR. SEVERANCE: Let him finish the answer.

THE WITNESS: (Continuing) I do not remember. I do not remember just the month or the time when the contract was made. The contracts are all in my office, any time you want to see the contracts.

By MR. DICKINSON:

Q. But I did understand you to say that the contracts were made each fall for the following year.

A. I did not say that, Judge.

Q. You did not say that?

A. No, sir; I said that the contract for 1911 was likely made the latter part of 1910.

Q. Oh, yes. How about the contracts for 1912?

A. That might be the same way.

Q. You do not undertake to say how it was?

A. No, sir; I do not.

Q. Who do you say got that contract?

A. For 1912?

Q. Yes.

A. The American Sheet & Tin Plate Company.

Q. How many bidders were there for that?

A. Only two.

Q. What two were they?

A. The McKeesport Company and the American Sheet & Tin Plate Company.

Q. Did you solicit any other? If so, who were they and what form of solicitation did you use?

A. No; I did not solicit any other.

Q. Do you remember what the price was at which this contract to the Sheet & Tin Plate Company was awarded?

A. No, sir.

Q. Do you remember what the McKeesport people bid?

A. No, sir.

Q. Have you any record of the bids?

A. Yes.

Q. I understood you to say it was verbal.

A. I have a record, because the contract speaks for itself.

Q. No; I mean the McKeesport Company's bid; have you a record of their bid?

A. No, sir; I have not.

Q. All you have is the contract which shows the basis upon which the contracts were awarded?

A. Yes, sir.

Q. Did you solicit any other bids for 1912?

A. No, sir.

Q. Except from the McKeesport Company and the American Sheet & Tin Plate Company?

A. No, sir; none that I remember.

Q. You say for 1913 the McKeesport Company got it?

A. Yes, sir.

Q. Can you state when that contract was awarded, about?

A. It was awarded in December or November; I will not be sure; the latter part of last year.

Q. Of 1912?

A. Yes, sir.

Q. Who bid on that contract besides the McKeesport Company?

A. The American Sheet & Tin Plate Company.

Q. Any other company?

A. No, sir.

Q. Did you solicit any other company?

A. No, sir.

Q. What other makers were there of tin plate in the United States besides the McKeesport Company and the American Sheet & Tin Plate Company during the years 1910, 1911, 1912 and 1913? Were there a number of them?

A. Well, I can only remember the American Sheet & Tin Plate Company, the McKeesport Tin Plate Company; Jones & Laughlin I think had gotten into the business in 1910, or certainly in 1911; the Phillips Sheet & Tin Plate Company and the Pope Tin Plate Company.

Q. That is all you can name?

A. That is all I can name; yes, sir.

Q. Do you know any others in the business during that year?

A. I do not remember any.

Q. How large a plant did the McKeesport Company have and where was it situated?

A. How large was the McKeesport plant?

Q. Yes; what was their output?

A. I don't know.

Q. Have you ever been to their works?

A. Yes, sir.

Q. You have been to the works of the American Sheet & Tin Plate Company?

A. No.

Q. You have never been to them?

A. No, sir.

Q. Where is the McKeesport Plant situated?

A. At McKeesport, Pennsylvania.

Q. What did they have there in the nature of tin plate works? Was it a large plant or small plant?

A. I could not say, sir. I do not know what constitutes a large plant or a small plant.

Q. Do you know anything about their annual output?

A. No, sir.

Q. Coming back to the year 1901, from whom did you buy the supply of tin plate for consumption in that year?

A. I took my office September 1, 1901.

Q. Then we will take for the year of consumption 1902.

A. I do not know that I could state positively, but I think Dickerson, VanDusen & Company, brokers, here in the city, handled that business.

Q. What concern did they represent? Who actually supplied it?

A. Oh, I do not know about that. We bought it from them.

Q. But when you put orders with a broker, they put the orders with the manufacturers, do they not? And was not the delivery made from the manufacturers direct to you?

A. It might be that I was not as wise then, Judge, as I am now, on the tin plate purchases. I did not know anything about the tin plate business, and if we bought it from Dickerson VanDusen & Company it was because I had not waked up to the fact that the American Sheet & Tin Plate Company or the McKeesport Tin Plate Company, or any other company, would take our business at a lower price than they would.

Q. At a lower price than the brokers would?

A. Yes.

Q. How long before you did get wise on that subject?

A. I cannot remember when I commenced dealing with the mills direct; perhaps in 1903 or 1904; I do not know; I could not state positively.

Q. When you began to deal with the mills direct what concern did you first get your supply from, and for what year?

A. I do not know, sir; I do not remember.

Q. What is the first year you can remember when you got your supply direct from the manufacturer?

A. I think 1909, perhaps.

Q. So, so far as you can remember, up to 1909, you dealt through brokers?

A. I do not want to put it that way.

Q. Well, how do you want to put it?

A. I do not know whether we dealt with brokers or with the tin plate people up to 1909.

Q. So, from 1902, which was the first year that you bought for consumption, down to 1909, when you remember that you dealt directly with the manufacturer, you cannot recall whether during those intervening years you dealt with any manufacturer at all?

A. No, sir.

Q. During that period how did you proceed in your purchases through brokers? Did you send out written proposals, or did you go to see the brokers, or did you let them see you, or did you take bids, or how? Please tell us exactly what you did. I want to get your modus operandi.

A. I could not tell you. I do not remember.

Q. And you were purchasing agent during all that time?

A. Yes, sir.

Q. From 1902 down to 1909?

A. Yes, sir.

Q. And you cannot tell us what you did?

A. No.

MR. SEVERANCE: He did not say that.

THE WITNESS: I did not say that.

By MR. DICKINSON:

Q. I mean about what I am asking you.

A. I did not say that. I do not remember whether I purchased through brokers or manufacturers, and I do not remember whether we sent out bids, or invited them to come to us. That is what I said.

Q. That is what I understood you to say. My question related to the particular things we were discussing. I did not mean to say that you did not remember anything. I mean about the particular things I have been questioning you about.

A. Yes.

Q. I will put it this way, then:

From the year 1902 down to 1909, can you say whether or not you sent out any solicitations for bids?

A. Yes; we sent out solicitations for bids by writing to

perhaps the different brokers and perhaps the different mills, telling them we wanted to buy a certain quantity of tin plate, and they would never think about writing us a letter; they would come to see us.

Q. You say "perhaps."

A. Yes; because I do not know.

Q. That is what I want to get at: Then you cannot say that you now recall, during that period, how you proceeded in the matter of taking bids. Is that true or not true?

A. I have just told you how I thought I proceeded.

Q. Yes; "perhaps," you said.

A. Yes.

Q. But, as I understand you, you have no definite recollection?

A. I have no definite recollection, but it is fair to assume that we did correspond with them and tell them we wanted so much tin plate.

Q. But you are basing that on a general assumption, and not on any recollection of it?

A. I could not do it in any other way.

Q. I just wanted to get at the question of whether you have any distinct recollection in regard to these transactions.

A. I have not a distinct recollection whether I sent out for bids, or whether I sent out and asked them to call.

Q. And whether you sent them to manufacturers during that period, you say you do not remember?

A. I sent them to manufacturers; I am sure that I did, but I would not say so positively. I am sure that I did, as well as to brokers.

Q. You say that you recollect that you did. I want to know do you remember positively about soliciting manufacturers and if so, from whom?

A. I could not say without referring to the records.

Q. Then you cannot say from memory whether during that period you solicited manufacturers, from 1902 down to 1909?

A. Yes; I would say yes to that, that I would solicit them.

Q. Tell me what year it was, and whom you solicited.

A. I do not know; I cannot remember now.

Q. You cannot remember now?

A. No, sir.

Q. That is just what I asked you, if you could remember.

A. It is a matter of record in my office.

Q. Now, for 1909, from whom did you get your supply? I mean for the consumption of 1909.

A. I think it was the American Sheet & Tin Plate Company.

Q. Now, you say your recollection is that for 1909 you bought from the American Sheet & Tin Plate Company?

A. The deliveries, I think, were principally from the American Sheet & Tin Plate Company.

MR. SEVERANCE: I did not get that. Is that for the delivery of 1909 or 1910?

THE WITNESS: 1909 delivery.

By MR. DICKINSON:

Q. You say the deliveries were from them. You mean that the contract was also with that company?

A. Yes.

MR. SEVERANCE: He spoke of having contracted in the winter for the subsequent year's delivery.

MR. DICKINSON: I did not know but that there was some distinction between "deliveries" and "contract."

By MR. DICKINSON:

Q. That year whom did you solicit other than the American Sheet & Tin Plate Company, for that year?

A. I do not remember that; I could not say.

Q. During that time were the same people manufacturing that you have mentioned as manufacturing in subsequent years; that is, the McKeesport Company, and Phillips, I believe you mentioned, and Pope; were the same ones making tin plate at that time?

A. Pope was, I am pretty sure. I do not know whether McKeesport were or not; I think they were.

Q. How long has McKeesport been manufacturing, so far as you know?

A. I do not know.

Q. Do you know how long you have been dealing with them?

A. Yes.

Q. How long?

A. We have been dealing two or three years, I think.

Q. Before that with whom did you deal?

A. Pope, largely; one year.

Q. What year?

A. I do not know whether it was 1909 or 1910. You know, when we speak of contracts for tin plate, I did not mean to infer that those contracts covered all of our requirements of tin plate.

Q. I am asking you about the bulk of your purchases, and I supposed that you were speaking of that.

MR. SEVERANCE: Let him finish his answer.

THE WITNESS: (Continuing) That would be the bulk of our purchases. Now, for the rest of a contract, or the rest of our requirements, we would buy perhaps from two or three manufacturers, two or three or four jobbers, wherever we could get the best offer. If anybody came in and wanted to sell us 10,000 boxes of tin plate at a price, we would take them.

By MR. DICKINSON:

Q. What year was it that you got the bulk of your supplies from Pope?

A. We never got the bulk of our supplies from Pope at all. For instance, there was the American Snuff Company—I do not know whether in 1909 or 1910—preferred Pope's manufacture, and we bought their entire requirements from them.

Q. You referred to that, I believe, in your direct examination?

A. I think so.

Q. Now, up to the time you began dealing with the McKeesport people, from whom had you gotten the bulk of your supplies each year, from the time you began purchasing?

A. I think the American Sheet & Tin Plate Company.

Q. State as near as you can the first year that you dealt with the McKeesport people.

A. I think, so far as the bulk of our requirements are concerned, and if my recollection serves me right, 1910.

MR. DICKINSON: That is all.

(Certain contracts produced by the witness Morton W. Reed are offered in evidence by counsel for the Government at the end of the 104th Day of this record [page 7714].)

HENRY A. KEINER

was called as a witness on behalf of the defendants, and being first duly sworn, testified as follows:

DIRECT EXAMINATION

By MR. SEVERANCE:

Q. Where do you reside?

A. 345 Willow Street, Richmond Hill, New York.

Q. What is your business?

A. Manufacturer of metal goods of various kinds.

Q. What is the name of your company?

A. The Keiner-Williams Stamping Company.

Q. What sort of metal goods do you manufacture?

A. Soda-water tanks, milk cans, ice cream cans, telephone wall boxes, for instance, pile booths, used for concrete walls, and various other special work, made from steel and tin plate.

MR. DICKINSON: Pile booths?

THE WITNESS: Yes. Some people call them spiles.

By MR. SEVERANCE:

Q. Where is your plant located?

A. Richmond Hill.

Q. What borough is that?

A. Queens.

Q. How long have you been in business at that place? How long has your company been in business at that place?

A. At this particular spot we are now?

Q. Yes.

A. Two years and a half.

Q. Previous to that where did you do business?

A. At North Third Street, Brooklyn; I don't remember the number; I think it was 1911.

Q. And how many years back of that did your business extend?

A. Seven years.

Q. Seven years previous to the present place?

A. No, five years previous to going into the new factory.

Q. Previous to that time where did you do business?

A. With the Iron Clad Manufacturing Company, Brooklyn; John W. Wallace Company, Brooklyn, and Baltimore, Maryland.

Q. How long ago did you come to New York from Baltimore?

A. Fourteen years.

Q. What was the business of the Iron Clad Manufacturing Company?

A. The same line practically, only a larger volume; they made range boilers and a lot of other things that we don't make.

Q. And what was the business of the John W. Wallace Company?

A. The same line.

Q. When you were over in Baltimore what was your business?

A. Practically the same line, but at that time it was more of household utensils made of steel and tin plate as well.

Q. You have been in business for yourself the last seven years?

A. Seven years.

Q. Now, what steel requirements have you? What steel products do you require in your manufacturing business?

A. We buy what we call hot rolled annealed, pickled annealed, box annealed and bright cold rolled and hoops and bands and light bars.

Q. Taking up first the light bars, hoops and bands: From what different concerns have you been in the habit of making

your purchases during this time you have been in business through seven years past?

A. From the Carnegie Steel Company, E. G. Gautier & Company.

Q. Where are their mills?

A. Their mills are near Philadelphia, Frankfort, I think it is; Pavonia they call the little place; that is the E. G. Gautier mills.

Q. Who else?

A. Then we buy from jobbers, Froment & Company, Thomas W. Kiley & Company, and Caspar Ketzel, the Long Island Hardware Company. That is about all.

Q. You spoke of buying sheet steel of different kinds; from whom have you been in the habit of making your purchases of sheet steel?

A. From the La Belle Iron Works; from N. & G. Taylor, of Philadelphia. You mean in recent years?

Q. Yes, during this period of seven years, and different parts of it; have you bought from the American Sheet & Tin Plate Company?

A. The American Sheet & Tin Plate Company. I guess that covers the list.

Q. Did you buy anything of Alan Wood & Company?

A. Oh, yes, Alan Wood & Company of Philadelphia.

Q. Did you buy anything of the Canonsburg Steel & Iron Works?

A. The Canonsburg Steel & Iron Works, yes.

Q. Phillips?

A. Phillips Sheet & Tin Plate Company, yes. I guess I will have more in a minute. That is practically all. Excuse me just a minute. We also buy from some of the jobbers for immediate requirements, Bruce & Cook, and Dickerson & VanDusen.

Q. What has been your experience during these years in making your purchases, as to whether the prices quoted you by the different mills were the same or varied?

MR. DICKINSON: I object to that. The witness has not said that he got any quotations yet.

THE WITNESS: I usually ask prices, sometimes over the phone and sometimes by letter, of the different mills, and of course buy from the cheapest seller if that particular manufacture of his suits our purposes. Sometimes we get prices from some mills that do not make the particular quality, the particular finish of materials we want, and sometimes other mills make it that are not so good. Of course I select from the best mill, and sometimes pay higher prices.

By MR. SEVERANCE:

Q. That is about the way your purchases run?

A. All the time.

Q. Those are the considerations that determine the question?

A. Yes. I might add that we use most of our material for deep stamping purposes, and it must be good material to answer our purposes.

Q. Has your business been solicited by these different mills that you have named?

A. Yes, sir.

Q. What has been the fact as to whether the different mills—I do not know but what you have already answered this by saying you buy where you get cheapest if it will answer your purposes, but I would like to put the question as to whether in soliciting this busines these different mills have quoted prices exactly the same, or did their prices differ?

A. Prices differed.

Q. You spoke of buying hoops and bands from Gautier, Frankfort, Pennsylvania. Do you buy considerable or a small part of your requirements from them?

A. Quite a little. I cannot say just what percentage, because we make lots of special work which sometimes requires hoops and bands, and I buy at the best price.

Q. What do you say, Mr. Keiner, from your experience, as to whether the material made by the American Sheet & Tin Plate Company is better now than it was when you first went into the business?

A. I say it is.

Q. One thing I forgot to ask you when you were stating

the various kinds of business; you say you make soda tanks among other things?

A. Yes, sir.

Q. How does your business in soda tanks compare with that of other manufacturers in size, if you know?

A. I think we are the largest in the world.

Q. Was your business when you went into it seven years ago, the Keiner-Williams Company, established at that time or did you succeed some other business?

A. I just simply resigned from another concern and started.

Q. You started a new business?

A. Yes, sir.

Q. You say that the Keiner-Williams Company is a new business built up in the last seven years?

A. Absolutely.

MR. SEVERANCE: That is all.

CROSS EXAMINATION

By MR. DICKINSON:

Q. Do you make any long term contracts?

A. Sometimes.

Q. Over what periods do they run?

A. About three months.

Q. You call that a long term contract?

A. Yes, sir.

Q. I meant did you make any running over a period of a year or two or three years?

A. No.

Q. You say that in your business you use hoops and bands?

A. Yes.

Q. To what extent do you use them in your business?

A. We probably use two carloads in a year.

Q. Take the year 1912: From whom did you buy your hoops and bands for that year?

A. The major portion from the Carnegie Steel Company.

Q. And the previous year?

A. 1911?

Q. Yes.

A. The Carnegie Steel Company.

Q. How far back had you been getting the major portion of your hoops and bands from them?

A. Until about 1910 we did not use so very much, and I bought it mostly from jobbers, in smaller lots—two or three ton lots.

Q. And after you began to use a larger quantity of it you have been getting the bulk of it from the Carnegie Company?

A. Mostly, yes, sir.

Q. Taking the material going into your soda tanks, you use tin in that, do you?

A. Steel and pure block tin, pig tin, as it is called, rolled out into sheets.

Q. Does that constitute a large part of what enters into that manufacture?

A. You mean in the soda water tanks?

Q. Yes.

A. The steel is the heaviest, but the pig tin costs the most.

Q. Where do you get that tin?

A. We buy it from various jobbers.

Q. Do you buy any of it from manufacturers?

A. No, sir.

MR. SEVERANCE: That is imported.

THE WITNESS: That is all imported, controlled entirely from the other side.

By MR. DICKINSON:

Q. So none of these people you have spoken of deal in that at all—these manufacturers?

A. No, sir.

Q. Now, coming to the steel: You say in bulk that enters largely into it?

A. Yes.

Q. But as to the question of value it is small in comparison with the other?

A. Yes, sir.

Q. In what form do you get the steel that goes into these soda tanks?

A. In flat sheets.

Q. For 1912 from whom did you get the bulk of those?

A. Alan Wood, of Philadelphia.

Q. And for the year 1911 from whom did you get the bulk of them?

A. The same concern.

Q. Does that require a particular character or quality of steel for that purpose?

A. Yes, sir.

Q. Is it a specialty?

A. Yes, sir.

Q. Do Alan Wood & Company make just the character that you want, and does that have anything to do with——

A. I will explain that.

Q. Yes; explain it, please.

A. A soda water tank is subjected to a pressure of 500 pounds, hydrostatic pressure, and unless this sheet is made with a certain analysis it does not stand up under the pressure, and bulges out. When we first purchased them we had that trouble, and I went down and saw them and changed the analysis of the body of the tank, and since then it has been giving satisfaction and I have not changed.

Q. You have not tried to get it from anybody else?

A. Yes, sir.

Q. When?

A. Two years ago.

Q. Do you still go to Alan Wood & Company?

A. Yes.

Q. Why?

A. Because the material suited me, and the price.

Q. Who else made that same specialty, of the character that you wanted, other than Alan Wood & Company?

A. I know of none except the American Sheet & Tin Plate Company.

Q. But you bought from Alan Wood & Company on a question of quality?

A. Yes, sir. I had tried some of the American Sheet & Tin Plate Company's material and it did not suit me, for that particular purpose, as well as the material furnished by Alan Wood.

Q. You have mentioned a number of steel products that you use in your line of manufacture; are there any of those that are not specialties, but merely standard things?

A. Yes.

Q. What of them are standard and not special?

A. Nearly everything else that we use in material is standard.

Q. Will you mention what those are?

A. You mean the grades of material?

Q. I mean the general names of them.

A. The annealed and cold rolled, bright and cold rolled—that is special as far as the surface is concerned, but the other is the standard sheets, made by a number of mills.

Q. None of these things enter into the making of these soda tanks?

A. No, sir.

Q. The soda tank, I understand, is the larger part of your business?

A. No, sir.

Q. It is not?

A. No, sir. It is the bulk of our business, but it is not the largest part. I would say that we make about 8,000 of those tanks a year. Is this for publication?

Q. Yes; it will be published. We do not control the publications by the newspaper people, of course.

A. I prefer not to make the statement of what we turn out in a year for the benefit of my competitors.

Q. I will not press you on that, but I will follow you along on another line. I do not want to unduly inquire into your business.

A. I would not like to make that statement for our competitors' benefit.

Q. I do not want to do anything that might injure you unless I feel compelled to do it in developing the case.

Now, of these standard articles you have mentioned that you use in your business, take the year 1912: From whom did you get the bulk of them?

A. From the American Sheet & Tin Plate Company.

Q. Take the year 1911; from whom did you get the bulk of them?

A. From the same concern.

Q. And the year before that?

A. This I am giving you a little bit wrong: You say the bulk of the business. Would half of it mean the bulk?

Q. You had better explain yourself. I do not want to put an interpretation on your language.

A. I will just explain then. For the last four or five years, about fifty per cent. of our requirements in this other steel has come from the American Sheet & Tin Plate Company.

Mr. Dickinson: That is all.

REDIRECT EXAMINATION

By Mr. Severance:

Q. And the rest of it has come from the other concerns you have mentioned?

A. From these other mills.

Q. Wherever you could buy the best?

A. Wherever I could buy the cheapest.

EDWARD V. PETERS

was called as a witness on behalf of the defendants, and being first duly sworn, testified as follows:

DIRECT EXAMINATION

By Mr. Lindabury:

Q. I believe you are general purchasing agent of the New Jersey Zinc Company?

A. Yes.

Q. Where are its offices in this city?

A. 55 Wall Street, New York City.

Q. Does the New Jersey Zinc Company have occasion to buy structural steel?

A. Yes.

Q. Both fabricated and unfabricated?

A. Yes.

Q. What are the purchases of fabricated material per annum, as near as you recollect?

A. About 3,500 to 4,000 tons a year.

Q. How much unfabricated material does it buy?

A. About 1,000 tons a year, I should think.

Q. And are those purchases for use in its business?

A. Yes.

Q. Does it buy any steel products to sell again?

A. No, sir.

Q. Only for its own consumption?

A. Yes.

Q. That will apply, then, to other purchases that I will ask you about?

A. Yes.

Q. Because you say they buy no steel to sell again?

A. They do not.

Q. Where do they buy their fabricated material?

A. Do you want the names of the companies?

Q. Yes, if you can recall them.

A. The American Bridge Company; the Belmont Iron Works; Jones & Laughlin; the Lackawanna Bridge Company, and numerous bridge concerns that I can give you if you like.

Q. Now, where do you buy your unfabricated material? I suppose you call the unfabricated material structural shapes, do you not?

A. Structural shapes.

Q. Where do you buy your structural shapes.

A. From the Carnegie Steel Company; the Lackawanna Steel Company; the Eastern Steel Company; the Phoenix Iron Company, and others.

Q. Are or are not those purchases made on a competitive basis?

A. They are.

Q. How?

A. We send out inquiries for prices for the material that we desire to purchase, to the various concerns that I have named, and the business is awarded as a result of the bidding that is received.

Q. How long have you been purchasing agent for this company?

A. I have been general purchasing agent for a very short time; I think since the 1st of June.

Q. Before that what was your position?

A. Assistant general purchasing agent and purchasing agent.

Q. For how long a period of time have you filled one or the other of those positions?

A. Seven years.

Q. Have you had to do with the purchase of steel supplies for that company as required during the whole of the seven years?

A. I have been familiar with it, yes.

Q. Have the quotations of these different manufacturers on fabricated material been uniform or variant during the seven years that you have been acquainted with the business.

A. Variant.

Q. And how as to unfabricated material?

A. Variant.

Q. Have you bought any sheets?

A. Yes.

Q. What has been the extent of your purchases of sheets during the seven years?

A. Five to six thousand tons during the seven years.

Q. And about how much a year? Have they been distributed equally, with fair evenness?

A. Fairly so.

Q. Where do you buy those?

A. From the American Sheet & Tin Plate Company, the Brier Hill Steel Company, and prior to the formation of the Brier Hill Company, from the various concerns that afterward consolidated into that company. I will give you a list

if you like. I was going to say the McCullough Iron Company of Wilmington.

Q. What percentage of your purchases of sheets has been made from the American Sheet & Tin Plate Company?

A. I think about 30 per cent.

Q. And the rest have been by purchases from other concerns?

A. Yes.

Q. Have or not those purchases been made on a competitive basis?

A. They have.

Q. How has that competition been manifested?

A. By bidding as the result of inquiries which we would send out inviting quotations.

Q. Have the quotations on sheets been uniform or variant during the seven years you have been getting them?

A. They have been variant.

Q. In the 25 or 30 per cent.—that is the figure you gave——

MR. DICKINSON: He did not say "25 or 30;" he said 30.

THE WITNESS: About 30 per cent.

By MR. LINDABURY:

Q. In the 30 per cent. of your purchases from the American Sheet & Tin Plate Company, were the prices better than those of the other concerns from whom you received quotations?

A. In most all cases, yes.

Q. And in other cases were the prices better?

A. I do not quite understand the question. Does that apply to the percentage beyond the 30?

Q. Yes.

A. Yes, in most cases, I should say, most all cases.

Q. Now, in certain other cases did other considerations enter into the purchases, other than the mere price?

A. In some few of the cases, yes.

Q. A few, such as what; quality, delivery or what?

MR. DICKINSON: I object to that as leading.

MR. LINDABURY: I will take it out.

MR. DICKINSON: You cannot take it out of his mind.

By MR. LINDABURY:

Q. Take out of your mind that last question and answer this one.

MR. DICKINSON: I object to that as improper examination.

By MR. LINDABURY:

Q. What other considerations entered into the purchasing except price, in the certain instances that you referred to?

A. Deliveries; that has been the principal thing.

Q. Do you buy any plates?

A. Yes.

Q. What has been the extent of your purchases of plates per annum?

A. About 100 tons.

Q. From whom have you purchased them?

A. From the Carnegie Steel Company; the Bethlehem Steel Company; Worth Brothers, and Lukens Iron & Steel Company.

Q. What per cent. of your purchases has been made from the Carnegie Steel Company?

A. I think about 30 per cent.

Q. Have those purchases been made on a competitive basis?

A. Yes.

Q. Has that competition extended to price?

A. Yes.

Q. Were the quotations from the different manufacturers of these plates uniform or variant?

A. Variant.

Q. Has that been the case during the whole of the seven years?

A. I think so, yes.

Q. Have you purchased any wire rope?

A. We have.

Q. How much of that do you buy a year?

A. It is difficult to answer that in tonnage. If I can give it in dollars and cents——

Q. You may.

A. Around $3,000 worth a year.

Q. Do you purchase any of that from the American Steel & Wire Company?

A. Yes.

Q. How much?

A. I should say about 20 per cent.

Q. Where do you get the balance?

A. Nearly all of the balance from John A. Roebling's Sons Company.

Q. Were those purchases made on a competitive basis?

A. Yes.

Q. Did you receive quotations from the American Steel & Wire Company and Roebling, and anybody beside?

A. Yes.

Q. Were the quotations uniform or variant?

A. Variant.

Q. Has that been the case during the whole seven years?

A. Yes.

Q. Do you buy wire nails for use in your business?

A. Yes, sir.

Q. How extensive has been your purchase of wire nails?

A. About thirty tons a year.

Q. From whom have you bought your wire nails?

A. From the American Steel & Wire Company, the Pittsburgh Steel Company, and jobbers.

Q. What percentage from the American Steel & Wire Company.

A. Twenty to twenty-five per cent.

Q. Have those purchases been made on a competitive basis or otherwise?

A. Competitive mostly.

Q. Have the quotations on nails been uniform to you, or variant?

A. Variant.

Q. Has there been at any time during the seven years that you have been connected with the business any indication of

a combination between the manufacturers of these different products, or any of them, either to fix or to maintain prices on the articles that you have purchased?

MR. DICKINSON: Objected to as incompetent, as calling for a conclusion of the witness and not a state of facts.

THE WITNESS: Do you want me to answer now?

By MR. LINDABURY:

Q. You may answer.

A. Not as far as I could judge from the prices which have been quoted me.

MR. LINDABURY: Cross examine.

CROSS EXAMINATION

By MR. DICKINSON:

Q. Had you finished your answer?

A. Yes, sir.

Q. Suppose you go beyond the mere quotation of prices to you, then please continue your answer to that question.

A. My reason for answering that in that fashion was that in reading the various trade papers and newspapers I have seen it stated that certain prices were the standard prices and were being maintained as uniform prices. I qualified my answer for that reason.

Q. What trade papers did you see this in?

A. Well, the Iron Age, principally.

Q. Has not the Iron Age general acceptance in the trade as being a responsible and authoritative paper?

A. I think it has.

Q. For what periods of time did you see these statements?

A. For the past seven years.

Q. In regard to what commodities did you see them?

A. Structural material; structural shapes.

Q. Nails?

A. I have not noticed nails particularly. Bars, I should say.

Q. Plates?

A. Plates I have not noticed particularly.

Q. Don't you know, Mr. Peters, as a matter of fact, during long portions of that period, within seven years, that there were publications in that paper in regard to pools that were maintained in regard to structural shapes and plates and in respect to nails and wire?

A. I have seen such articles.

Q. Wasn't that a matter of general notoriety and comment among people in that line of business?

A. It was known that such articles appeared, I think, by people in my class of business who read the paper.

Q. You have spoken of variant prices during seven years; you did not mean to say by that that there had not been periods of months at a time during that seven years where the base price of standard articles had been maintained substantially the same for quite a length of time?

A. I meant to say that during that time when we received quotations the prices were not uniform.

Q. Not uniform throughout the whole seven years, or there were times when they were not uniform?

A. I would not say that there was not a single time when they were not uniform, but in most cases that I can remember the prices were ununiform.

Q. Take the Carnegie Company and the Lackawanna Company in regard to structural shapes: Don't you know that throughout a long period, that is, periods of several months at a time at least, within that seven years, that they maintained a uniform price under a pool?

A. I did not know that; no, sir.

Q. You did not know it?

A. No, sir.

Mr. Lindabury: I object to that. There has been nothing of that proven in this case or anything of that kind ever published in any newspaper.

Mr. Dickinson: I will put it minimum price.

Mr. Lindabury: The natural inference that a witness draws from such a question as yours is that you are alluding to something that has been shown in the case. I know you do not mean to do that, but it is possible to mislead a witness.

MR. DICKINSON: I will ask the stenographer to repeat the question.

(The stenographer read the question referred to as follows:)

"Q. Take the Carnegie Company and the Lackawanna Company in regard to structural shapes: Don't you know that throughout a long period, that is, periods of several months at a time at least, within that seven years, that they maintained a uniform price under a pool?"

MR. DICKINSON: I am not asking anything that has been asserted in the case. I am asking the witness what he knows.

THE WITNESS: I do not know that; no, sir.

Q. Mr. Peters, you say that you are now purchasing agent, and have been for how long?

A. I am general purchasing agent at the present time, and have been since the 1st of June of this year.

Q. What are your duties as general purchasing agent?

A. To direct the purchasing policy and to pass upon the large purchases of the company.

Q. Have you assistants?

A. Yes, sir.

Q. What do they do?

A. They handle the sending out of inquiries, securing of prices, tabulation of prices received, the tracing of orders placed, checking of invoices rendered; that is their principal work.

Q. How many have you?

A. About 12, I think.

Q. Have you various assistants whose duties are confined to various departments, or do all twelve cover the whole field?

A. The buying is divided into certain classifications, and a certain man takes care of certain classifications of the buying.

Q. Has he anything to do with the whole subject-matter or only with the classification that is assigned to him?

A. That is all.

Q. Before you became general purchasing agent, you were an assistant, were you?

A. Yes, sir.

Q. What was your position then?

A. Assistant general purchasing agent, and prior to that purchasing agent.

Q. These assistants to you are called what?

A. At the present time?

Q. Yes.

A. Purchasing agents.

Q. Not assistant general purchasing agents?

A. No, sir.

Q. When you were assistant general purchasing agent what were your duties?

A. To assist the general purchasing agent in the supervision of the department, and assist him in the direction of the buying policies.

Q. Who made the contracts?

A. The general purchasing agent.

Q. You did not make any of the contracts?

A. I made some of the smaller contracts, with his knowledge.

Q. And he made the larger ones, did he?

A. Yes, sir.

Q. Over what period of time did that method extend?

A. That extended over a period of seven years, but not exactly with the titles which I have given you; but practically with the same formation, with different titles.

Q. But the relative positions were the same?

A. The relative positions were the same.

Q. And the relative duties were the same during that seven years you have mentioned?

A. Yes, sir.

Q. Take the first year that you were there; that carries us back seven years?

A. To 1906.

Q. To 1906. In that year do you know now what percentage you purchased from any of these companies?

A. I cannot give you the figures; no, sir.

Q. Have you looked over them lately?

A. Yes, sir.

Q. But you cannot give the figures?

A. No, sir.

Q. Take the next year; could you give the figures?

A. I do not believe I could give the figures for any individual year. I have taken the average.

Q. But you already stated that about 20 per cent. of the wire rope, which amounted to about $3,000 per year, was bought from the American Steel & Wire Company, and nearly all of the balance from Roebling's Sons & Company. What year, if any, did you have in mind when you made that statement?

A. I had the entire seven years in mind.

Q. Have you gone over all the purchases for those entire seven years and made figures on them?

A. Yes, sir.

Q. Where are those figures?

A. They are at my office.

Q. Will you produce those, please?

A. I will.

Q. From those figures did you reach the result that during those seven years the purchases of wire rope from the American Steel & Wire Company would be about 20 per cent.?

A. That is my recollection of the figures; yes, sir.

Q. And you have those figures, have you?

A. Yes, sir.

Q. Now, then, you spoke of wire nails. Did you make figures covering that period of seven years showing the purchases from all the companies that your company bought from, in wire nails?

A. Yes; the same as I did in the case of wire rope.

Q. Did you reach a percentage of all those purchases for each of those seven years awarded to the American Steel & Wire Company?

A. In glancing over the figures I arrived at what I thought was the percentage, as shown by the figures for the various years—just the average for that period of time.

Q. You reached that by glancing over them?

A. Yes; very hurriedly.

Q. And you did not actually calculate it?

A. Excepting mentally.

Q. During that period of seven years how many purchases did you make of wire nails?

A. How many?

Q. Yes.

A. I could not answer that.

Q. Did you make them all at one time for each year, or at various times?

A. At various times.

Q. And you bought from various people?

A. Yes, sir.

Q. Then, during that seven years, for wire nails, there would be a great many purchases, would there?

A. A great many.

Q. And you simply reached your idea of the percentage by glancing at the figures, without making any calculation?

A. I think possibly I may have misled you in that. The figures have been compiled from the orders that were placed. I was just shown a statement of the amounts for the various years, and I mentally arrived at that percentage, based on the figures which had been gathered.

Q. You say the figures were compiled?

A. Yes.

Q. Did you compile them?

A. No, sir.

Q. Someone else compiled them?

A. Yes.

Q. From what did he compile them?

A. From the orders that were placed.

Q. And those figures were shown to you, and you reached your conclusion by glancing at them?

A. Yes, sir.

Q. You did not compare them with the originals?

A. No, sir.

Q. And you just accepted what somebody else had done in that way?

A. Yes, sir.

Q. Does that apply to these other percentages you have given also?

A. Yes, sir.

MR. DICKINSON: We object to the statement of the witness in regard to percentages reached in the way he has described, as being secondary evidence, hearsay and incompetent.

By MR. DICKINSON:

Q. Take the quotations at which you have arrived for seven years. Do you bear in mind the prices which these various dealers quoted to you at the various times on the various articles throughout those seven years?

A. Not the actual prices, no, sir, that have been quoted.

Q. Could you give the prices on steel shapes for any period—I mean the various prices for any years by various dealers or makers—whom you solicited business from?

A. That would be a very difficult thing for me to answer, offhand.

Q. Would it not be impossible for you to answer offhand?

A. You mean the prices from each dealer for each year?

Q. Each of these competitive bids on any one of these articles.

A. It would be impossible for me to answer that, offhand; yes, sir.

Q. When did you yourself personally examine these quotations, if you have examined them at all, within recent times?

A. I see the tabulations of all quotations of any size. I am seeing them right along.

Q. That is to say, you solicit bids, and as they come in they are tabulated, and you see them then?

A. Yes, sir.

Q. Then, when a contract is awarded, you have no special reason to carry those in your mind after that, have you?

A. No, sir.

Q. Do you recall the quotations on any one of these articles made by these several competitors under any contract for any one of those years?

A. I can give you some of the recent ones—this year.

Q. This year?

A. Yes.

Q. Well, take the year 1911.

A. I think I can give you the figure of the successful bidders; I do not think I can remember the figures of the other bidders.

Q. That is what I am getting at, whether you can recall the figures on any contract?

A. No.

Q. Not for those years?

A. No; I do not believe so.

Q. And you have not seen the bids tabulated after they were awarded?

A. Yes.

Q. When?

A. At various times that the papers have been gotten out; not recently.

Q. When did you last see instances of bids for 1907?

A. I cannot tell you when; I should say not this year—last year probably. I think I saw them last year.

Q. What occasion did you have to see them last year?

A. The records were being transferred.

Q. Being transferred?

A. Transferred from our current files to a storeroom, and I looked over the papers that were being transferred, and I naturally saw the figures at that time. I think 1907 was transferred last year.

Q. How many records were transferred last year?

A. How many records?

Q. Yes, in volume?

A. I would say probably correspondence and records sufficient to fill four drawers about two feet deep—about eight feet.

Q. How long were you in making that transfer?

A. Two to three weeks; I did it at odd times.

Q. What was the purpose of transferring them?

A. To get more room for current material in our files.

Q. And in doing that the only necessity for that occasion was simply to go far enough in identification of what the particular papers were?

A. Yes.

Q. The subject-matter?

A. That is all, sir.

Q. And you were not called upon to go into the details of the contents of those papers?

A. No, sir.

Q. And your mind was not on that subject at all, then?

A. Not particularly.

Q. You did not read all these papers?

A. No, sir.

Q. You did not undertake to familiarize yourself, then, with the contents, or refresh your mind as to the contents of all these papers?

A. I did not have that object in view; no, sir.

Q. As a matter of fact, can you mention any year back of the year 1912 where you have any recollection of the various contracts that were awarded, and the various bids that were made upon which those contracts were awarded?

A. Prior to the year 1912?

Q. Prior to the year 1912.

A. I cannot give you the bids, except of the successful bidders in some of the transactions. I do not remember the actual bids of the bidders.

Q. Could you give the successful bidders in all the contracts awarded for any one year?

A. No, sir.

Q. Take the question of structural steel shapes; take the year 1907; was that awarded under competitive bidding?

A. In 1907?

Q. Yes.

A. Yes, sir.

Q. Who were the competitors?

A. The Eastern Steel Company, the Phoenix Iron Company and the Carnegie Steel Company——

Q. Do you know who got it for that year?

MR. LINDABURY: He has not finished, I think.

THE WITNESS: There were others besides those. Those were not contracts. Our business is awarded on the basis of inquiries sent out on individual orders, and there was no

contract placed for the year. The business was done from time to time on the basis of our requirements, and was divided amongst these various people.

By Mr. Dickinson:

Q. And there were a number of transactions for that year in structural shapes?

A. Yes, sir.

Q. And the same way for each of those years?

A. Yes.

Q. And the same way for each of the years for each of the various commodities which you purchased?

A. Yes.

Q. Now, what kind of structural steel have you been buying in the last seven years, non-fabricated?

A. Angles, channels, I-beams and other standard shapes.

Q. From whom have you bought the bulk of that in the last seven years? I mean by the bulk the majority?

A. From what concern?

Q. Yes, if any?

A. I hardly know which to say of two concerns. I can give the two. I do not know in tonnage who exceeded the other.

Q. Give those two.

A. I should say Jones & Laughlin and the Lackawanna Steel Company.

Q. Do you know which of those two you got the most from?

A. No, sir.

Mr. Lindabury: I suggest that the witness did not understand that question.

Mr. Dickinson: Let us have him understand it.

Mr. Lindabury: It asked whether he bought 50 per cent. or more from anyone, and if so, which—that was my understanding of the question.

The Witness: May I have this last question read?

(The question was repeated by the stenographer.)

Mr. Dickinson: Well, that is a repetition of the other question. I think he answered the question indirectly; he

said there were two, and he gave the names of them, and said he could not tell which one was more than the other.

MR. LINDABURY: I had in mind he did not by that mean to intimate that he bought fifty per cent. or more from anyone.

MR. DICKINSON: His answer would negative that, because if not, it would be that he got the bulk from one, and he said he did not know.

By MR. DICKINSON:

Q. You have spoken of prices and the variance of prices during the last seven years. Are you now familiar with the prices that prevailed six years ago, the general market price of these various articles?

A. Not very familiar; no, sir.

Q. Take five years ago.

A. In a general way I am.

Q. Could you give what the papers quoted, if any, as the market price during any particular period of time in that year, the base price on any of those articles?

A. Five years ago?

Q. Yes.

A. My recollection of structural steel—and by that I mean beams and angles—in 1908, is that the Iron Age price was around $1.25 to $1.30.

Q. How much would that be per ton?

A. $1.25 would be $25 a ton; $1.30 would be $26 a ton.

Q. I will ask you as a matter of recollection whether in 1908 the average prices of beams at Pittsburgh, or any time during the year 1908, was within $10 of $25 a ton.

MR. LINDABURY: Do you mean now as quoted in the Iron Age, or as actually quoted by the manufacturers?

MR. DICKINSON: I will say quoted in the Iron Age.

THE WITNESS: Was within $10 of that price?

By MR. DICKINSON:

Q. Yes.

A. I said I thought it was that price, so that I would certainly say I would think it was at some time within $10 of that price.

Q. When you spoke of the prices, were you speaking of the quoted market prices such as are quoted in the Iron Age?

A. That is what I had in mind; yes, sir.

Q. Take the structural shapes; the structural shapes purchased by you, were they of standard sizes or above or below the sizes upon which base prices were quoted in the Iron Age?

A. Standard sizes.

Q. Standard sizes?

A. Yes, sir.

Q. Were they larger or smaller than the base price on which the quotations were given?

A. The quotations were given, I believe, on base sizes.

Q. Yes.

A. They were not all base sizes; you ask, standard sizes?

Q. I understand, but were they above or below?

A. Above and below, both; the base size.

Q. Both above and below?

A. Yes, sir.

Q. Then did the system of extras apply to those?

A. It applied.

Q. In reaching the price?

A. It applied to sizes that were not standard.

Q. How was the price reached? Was there not a base price that was applied, and to which were added or from which were taken differences on account of variations in standards?

A. The price reached, you mean the price on which we determined to place our business?

Q. Yes.

A. Extras were taken into consideration, yes.

Q. Was the price increased on account of those extras?

A. Yes.

Q. Well, now, was that price reached by taking the base market price and then adding to it the extras?

A. That is the customary way, yes.

Q. That was the customary way?

A. Yes.

Q. And was that the customary way throughout long

periods of time within these seven years to which you have referred; in respect to beams, I am asking now.

A. Beams and angles; yes, sir. I would like to, if I may, just explain that a little bit.

Q. Yes, I want you to explain it.

A. There are two different ways or methods in which we receive quotations. One manner is to quote the base price with extras simply marked "additional"; the other way is to quote a net price at which the particular material specified will be furnished. In those cases I do not know what base price the manufacturer is figuring on.

Q. But in the other cases what base was he figuring on?

A. In the other case I know.

Q. And what was that?

A. What was the base at that time?

Q. No, I do not mean the particular time, but was that the published base market price?

A. Not always.

Q. Wasn't it frequently so?

A. Frequently.

Q. And were not competitive bids frequently made upon the base price, with a certain additional amount for extras?

A. Frequently; yes, sir.

Q. And that extended off and on at times throughout this period of seven years?

A. Yes, sir.

Q. We have spoken of beams. That was also true of plates, wasn't it?

A. Not to such an extent. Our purchases of plates were small, and to the best of my recollection, our prices on plates have been net.

Q. What percentage of your fabricated material did you get from the American Bridge Company during the year 1911?

A. During the year 1911?

Q. Yes, for the year 1911.

A. Let me think a moment. I want to think what we were doing then. I do not believe I could answer that very ac-

curately. The percentage was very small during the year 1911.

Q. Well, take the year 1910.

A. 1910, I cannot give you the percentages there. My recollection of it was that it was around 15 or 20 per cent. in the year 1910. I think it was less than that in 1911.

Q. You say that is your recollection?

A. That is my recollection.

Q. That is your recollection, based upon the same way and method that you have described, that you got these other averages?

A. As I described a little while ago; yes, sir.

Q. And it is just upon the same kind of a process that you reached that conclusion?

A. Yes, sir.

RE-DIRECT EXAMINATION

By Mr. Lindabury:

Q. You stated that you had consulted certain tabulations which showed the purchases that your company has made of the various articles from various manufacturers, and Judge Dickinson asked you about that. Let me ask you whether or not your general recollection of the purchases accorded with those tabulations.

A. My general recollection caused me to believe that the tabulation I looked at was correct, based on my knowledge of the work we had been doing; otherwise I would not have accepted the figures.

Q. And these percentages that you gave in your direct examination, do they or not accord with your recollection of the divisions of your purchases independent of the tabulations?

A. They are approximately what I expected to find them.

Q. That is what I mean, you have not a close recollection?

A. No, sir.

Q. But they are approximately the extent of your purchases and the division of them?

A. From my recollection of them.

Mr. Lindabury: That is all.

RE-CROSS EXAMINATION

By Mr. Dickinson:

Q. What form were these things in that recall your recollection that you have just referred to?

A. You mean the tabulation I saw this morning?

Q. Yes.

A. It was just a rough sheet of paper that had been made up showing the various tonnages in the various classifications that we had purchased during the past seven years.

Q. Well, did it give the names of the bidders for the various years?

A. Yes, it was divided up in the various classifications and the various companies.

Q. Do you mean to say that independent of the tabulation you would have any recollection as to the details of those figures, and that they come back to your mind?

A. Is that the question?

Q. Yes.

A. In detail, no, sir; only generally have I a recollection.

Q. Could you now from memory give any of them independently of that paper?

A. Only in a general way. I could give what my recollection has been of the business. I had formed no percentages in my mind except that I knew in a general way how the business had been going for the past few years.

Q. Had you ever formed percentages in your mind?

A. I cannot say that I had in just the way that I asked for this statement to be prepared; no, sir.

Q. Then you had nothing in your memory in regard to percentages?

A. Except that I knew the tonnage generally that we had been awarding, and I remember how it has been divided up to a certain extent, which has gone to certain people, and I can remember our principal jobs and who they have been awarded to, and that gives me a general recollection of how our tonnage has been distributed.

Q. Will you state, then, for the year 1906, how the awards

were, and how the percentages were for that year on these various articles?

A. In the year 1906 I entered the employ of the Zinc Company in the latter part of the year, and it is rather a poor year for me to give you many statistics on.

Q. Take the year 1908, I will begin with that year. How many contracts of all kinds involved in these percentages that you have given were awarded for that year?

A. I could not tell you the number of contracts. I can remember in 1908 that we awarded a contract, I think it was either the latter part of 1908 or the first part of 1909, we awarded a contract of about 1,000 tons.

Q. For what?

A. Fabricated steel.

Q. But I am asking you of all of these various things in regard to which you have given percentages for the year 1908, can you, from memory, now give who the competitors were and what the prices were at any of those times?

A. I cannot for 1908, no, sir. I do not think for any particular year I could give any percentages of the business awarded to the various people.

Q. Have you any recollection on that subject?

MR. LINDABURY: I object to the question as frivolous, and not cross-examination.

By MR. DICKINSON:

Q. Just answer the question: Have you any recollection in respect of the bidders and prices for the particular contracts for that year?

A. Not in detail. I cannot give you figures; no, sir.

MR. DICKINSON: That is all.

MR. LINDABURY: That is all.

(Whereupon a recess was taken until 2 o'clock p. m.)

AFTER RECESS.

EUGENE E. HINKLE

was called as a witness on behalf of the defendants, and being first duly sworn, testified as follows:

DIRECT EXAMINATION

By Mr. Lindabury:

Q. Where do you live, Mr. Hinkle?

A. New York City.

Q. What is your business?

A. We are fabricators of structural steel and erectors also.

Q. What is the name of your concern?

A. The Hinkle Iron Company.

Q. Iron Company? Not iron works?

A. The Hinkle Iron Company; a corporation.

Q. You both fabricate and erect?

A. Yes.

Q. When was your business established?

A. In 1895; incorporated in 1908.

Q. Are you the Hinkle who has given his name to the Corporation?

A. Yes.

Q. And I suppose you have been connected with it, therefore, since its establishment?

A. Yes.

Q. I mean the business; not the corporation.

A. Yes.

Q. Where in New York is your place of business?

A. 55th and 56th Streets, near North River.

Q. When did you begin the fabrication of structural material?

A. I was connected with this business, began my connection with this business in 1890 with other people. My own business was established in 1895.

Q. Did you begin the fabrication of structural material at once upon the establishment of your business?

A. Yes.

Q. And the erection also?

A. Yes.

Q. Have you done much erection in this neighborhood?

A. Yes; a great deal.

Q. What has been the extent of your work?

A. We do about 8 or 10 per cent. of what is erected in the Metropolitan district.

Q. How long have you done that much of the work of steel erection? You mean steel erection, I suppose?

A. Yes, sir.

Q. How long have you done that percentage or about that percentage of the erection here?

A. Well, it has gradually increased since we started in the business.

Q. You mean the——

A. Our per cent.

Q. Oh; your percentage has increased?

A. Yes.

Q. Has the business generally increased since 1895?

A. Wonderfully so.

Q. How much has it increased during the last twenty years?

A. It has increased about—I can give you the figures.

Q. Suppose you do that.

A. About 7,000 or 8,000 tons used in the Metropolitan district about twenty years ago, to now about 250,000 tons.

Q. And this is all used in erecting buildings?

A. Yes.

Q. You are speaking only of the use of structural steel?

A. The use of structural steel for building purposes.

Q. How many buildings do you put up a year?

A. That varies. I should say on an average we put up 25 or 30 or 35 fireproof structures varying from eight to twelve or fifteen or eighteen stories.

Q. Per year?

A. Per year.

Q. I think you have the credit of having put up the first tall structure in the City of New York, have you not?

A. Yes.

Q. When was that and what was the building?

A. That is 29 Broadway, a twelve-story fireproof building, erected in 1890; the first building of its kind.

Q. The tallest building at that time?

A. At that time. Prior to that there was the ten-story Tower Building, which was the tallest building.

Q. What was that ten-story Tower Building?

A. It still exists on Broadway; I have forgotten the exact number.

Q. It is called the Tower Building?

A. It is called the Tower Building.

Q. Who are your principal competitors in the Metropolitan district?

A. The Levering & Garrigues Company; the Hay Foundry & Iron Company; Post & McCord, formerly Milliken Brothers; the Bradley Steel Construction Company, and a few others.

Q. Where do you get the material you fabricate and erect?

A. From the rolling mills.

Q. What steel manufacturers produce and sell structural shapes—I think that is what you call them?

A. Yes.

Q. That term is used to cover all structural material?

A. Yes.

Q. What concerns manufacture and sell structural shapes in this territory?

A. Jones & Laughlin; the Cambria Steel Company; the Lackawanna Steel Company; the Carnegie Steel Company; the Bethlehem Steel Company; the Phoenix Iron Company; the Eastern Steel Company; up until a few years ago there was the Passaic Steel Company.

Q. Do you buy your supplies from one of these concerns or a number of them?

A. We buy from most all of them.

Q. Do you buy on a competitive basis or not?

A. Yes.

Q. How is that manifested?

A. We buy on a competitive basis as to price and delivery.

Q. In what way is that competition carried on?

A. We usually send out for prices on any particular lot for any particular building.

Q. Do you generally buy your needs for each building separately?

A. As a general rule.

Q. And is it your practice to send out requests for quotations for your requirements for individual buildings?

A. Yes.

Q. To whom, I do not mean the names, do you send them out?

A. To the various mills.

MR. DICKINSON: Are you talking about structural or fabricated?

MR. LINDABURY: Structural; he does his own fabricating.

By MR. LINDABURY:

Q. Do you buy any fabricated material?

A. Very little.

Q. Now, do these different rolling mills generally quote you prices in response to your invitations?

A. Yes.

Q. Covering in the question the period embraced within the last ten years, have the quotations in response to these various inquiries been uniform or variant?

A. They have varied some.

Q. And has that been so with all classes of structural shapes?

A. Yes.

Q. And in all the years comprised within that period?

A. Yes.

Q. And in awarding your contracts or making your purchases, what have you had regard to?

A. Price and delivery.

Q. Have you bought any of your supplies from the Carnegie Company?

A. Yes.

Q. What percentage, about, during the ten years, giving us an average, have you bought from the Carnegie Company?

A. It would be hard to say exactly the percentage.

Q. I suppose so, but tell us approximately.

A. I might say in an offhand way that formerly we bought more than more recently.

Q. What do you mean by "formerly"? Can you fix the period of division?

A. Yes; eight or ten years ago we gave them a larger percentage of our business than we have since then.

Q. What concern has had the major part of your orders during the latter period?

A. During the last five to six years the Bethlehem Company has had a larger percentage of our business.

Q. That is, since the Bethlehem began to make special shapes, I suppose, is it not?

A. Yes.

Q. Before that time, then; that is, during the part of the ten year period preceding the Bethlehem's introduction of its special shapes, what percentage did you buy from the Carnegie Company, and where did you get the rest?

A. Well, I cannot answer that in very definite percentage.

Q. I know it, but perhaps you can approximate it.

A. We give them what is called a good share of our business, probably twenty-five per cent. of our business or more.

MR. DICKINSON: He says "We give"; you were asking about a time——

MR. LINDABURY: And he is speaking of now. I will put another question.

By MR. LINDABURY:

Q. You answered in your last answer with respect to the present time?

A. No, always.

MR. DICKINSON: Change that to "gave them."

MR. LINDABURY: I will straighten it out.

By MR. LINDABURY:

Q. Before the Bethlehem began the putting out of their special shapes, and during that part of the ten year period which preceded the Bethlehem's new production, you gave the Carnegie Company, if I understand your answer aright, about 25 per cent. of your business?

A. Yes.

Q. That is right; that is what you intended to say?

A. That is what I intended to say.

Q. Who got the rest of it?

A. Various mills.

Q. Can you name any of them?

A. The Passaic Steel Company, the Cambria, the Eastern Steel Company, the Phoenix Iron Company, and we may have bought from some of the others.

Q. Now, confining the question to that earlier period before the Bethlehem time, were those purchases made on a basis competitive as to price as well as to delivery?

A. Yes.

Q. Were the quotations of these different concerns on this structural material during that period generally variant?

A. Yes.

Q. Now, take the later period, the last six years, how much of your purchases during that period have been made from the Bethlehem Company?

A. From fifty to sixty per cent., or probably more, of our requirements.

Q. Does this special Bethlehem shape compete with the shapes of the other manufacturers in structural material?

A. Yes.

Q. In what way?

A. On most every building that we figure on they ask for alternate figures, both standard and Bethlehem, and in the majority of cases they give you the option to use whichever one will produce the cheapest results.

Q. What is the standard—bearing strength?

A. Yes.

Q. Is the Bethlehem shape sold at the same price as the average of the other shapes?

A. Generally at a higher pound price, but taking into consideration that it is about ten per cent. lighter and has a greater carrying capacity per unit of weight, the Bethlehem, as a general rule, figures cheaper net results.

Q. Has that been the reason for your purchases of 50 to 60, did you say, per cent. of your structural requirements from the Bethlehem during the last six years?

A. Yes.

Q. Have you made those purchases in competition with the peŕar manufacturers of structural material?

A. Yes.

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Q. Have you gotten bids from the other manufacturers since the Bethlehem began the manufacture and sale of these shapes as you did before when you had orders?

A. Yes.

Q. Or had requirements?

A. Yes.

Q. And have or not the quotations of the different manufacturers during this latter period of six years been variant?

A. Yes.

Q. As before?

A. Yes.

Q. In forty or fifty per cent. of the cases you seem to have bought during the last six years from other than the Bethlehem. Why was that? Were their prices better in those cases?

A. Prices and deliveries, and if I might say, the Bethlehem did not make any saving on smaller sections, that is, I believe, under ten-inch. On the ten-inch beams the weights are about the same as standard.

Q. And that affected the competition, I suppose, did it?

A. Yes, sir.

Q. Were they able to compete successfully as to those materials with the other manufacturers that you named, as a general thing, or not?

A. Not always.

Q. Sometimes they did?

A. Sometimes they would give us favorable quotations on the sizes which were not especially Bethlehem, and at other times they were not as low as others.

Q. Is there any one of those concerns you have named whose quotations were uniformly higher or uniformly lower than the others, or was there variation in that, too, one sometimes being higher and another sometimes being higher?

A. I believe the Carnegie Steel Company and the Cambria Steel were more uniformly higher.

Q. Than the others?

A. Than the others.

Q. Perhaps I might ask you what your purchases amounted to per year in tonnage.

A. I would not like to answer that for competitive reasons.

Q. Don't do it, then.

A. I had rather tell you in dollars and cents.

Q. All right.

A. It is about six or seven hundred thousand for material a year.

Q. Six or seven hundred thousand dollars?

A. Yes, sir.

MR. LINDABURY: Cross examine.

CROSS EXAMINATION

By MR. DICKINSON:

Q. I understood you to say that the prices varied somewhat; do you mean to say that at different periods there were variances in prices or at all periods?

A. At all periods there were variances in prices.

Q. Did you mean to apply that to standard structural material?

A. Yes, sir.

Q. And do you say that within your experience, so far as your purchases go, that at all times within the period that you have named there was always a variation in prices of what is known as standard structural material?

A. In the past ten or twelve years there has been more variance in prices; prior to that prices were practically uniform.

Q. Now, weren't they practically uniform down to about 1905?

A. Well, we bought less at what is known as the published rate.

Q. I understand, but I am asking you if they were not practically uniform, with some exceptional occasions; were they not practically uniform down to 1905?

A. In the majority of cases.

Q. Except at short intervals when there was what was known to be, what is called, an open market, even after 1905 for several years, over long periods of time—that is, I mean

several months at a time—were the prices of standard structural material constant by all the manufacturers?

A. Nearly so.

MR. DICKINSON: That is all.

RE-DIRECT EXAMINATION

By MR. LINDABURY:

Q. The Judge has asked you rather a long question. I am not sure whether you got all the material elements of it or not. Did you mean to except times of open market or closed market by your general answer that at all times prices were variant?

A. I understood the Judge's question was, with the exception of the time when it was the open market, were prices uniform. I said nearly so; there were exceptions practically all the time.

Q. Were the prices of the standard articles, although variant, as quoted by the different manufacturers, very far apart?

A. No.

Q. But was there ever any time when they all seemed generally to quote the same prices? Was there ever any such a time as that?

A. Yes, sir.

Q. When was that?

A. I could not fix it exactly; ten or twelve years ago.

Q. But during the last nine or ten years has that situation obtained when they all quoted the same prices as they did twelve or fifteen years ago?

A. Not as uniformly so during the past ten or twelve years.

Q. Have you during the last nine or ten years observed in the trade any indication of a combination between the producers of structural material either to fix or maintain prices; have you seen any indication of that?

A. No, I cannot say that I have, because we have always been able to buy under the published price.

MR. LINDABURY: That is all.

RE-CROSS EXAMINATION

By Mr. Dickinson:

Q. What do you mean by "published price," Mr. Hinkle?

A. The price which is published in the Record and Guide, the Iron Age, the Trade Review.

Q. What did that mean to the trade?

A. That was taken to mean that it was the nominal price, minimum price, base price.

Q. Minimum price? What do you mean by minimum price?

A. The base price; there were extras for certain sizes.

Q. But it was a price, was it not, that was understood in the trade, that the manufacturers would not sell below during the period that it obtained; is not that it? Is that what you mean by the minimum price?

A. I cannot say that it did mean that exactly, because we usually bought at less than that.

Q. Was that the understanding?

A. That was about the average price.

Q. And was not it generally known by you and everybody else in your line of business that certainly down as far as 1905 there were pools among a large number of manufacturers that controlled these prices and fixed these base prices?

A. I did not know that.

Q. Was it not a matter of common report and common knowledge?

A. It was a matter of newspaper report and talked of quite a bit.

Q. Was it not generally accepted as a fact by the people in your line of business; and did you not conduct your line of business with an understanding that that was the fact?

A. I cannot say what was generally accepted by others. We did not accept it as such, because we usually bought below that price.

Q. Below the minimum price?

A. Yes.

Q. Did you do it at all times?

A. Practically so; unless, for reasons of delivery, we paid a premium.

Q. When you paid a premium you did not buy below that price, did you?

A. No; I have told you that we generally bought below, except at times we would pay a premium for delivery.

Q. You are only speaking, then, of the matter of prices as to your personal experience, the personal experience of your corporation in their dealings?

A. Yes; I do not know about the prices of others, as to what they paid.

Q. What do you mean by premium, in the sense in which you have used that term?

A. A bonus over the published price.

Q. What were they paid for?

A. They were paid for prompt deliveries, quick deliveries; what is called mill stock deliveries.

Q. There was a recognition, then, was there not, of a published price?

A. In a way.

Q. And this premium was something over and above that price, was it not?

A. Yes.

Q. Was that price accepted, then, as the base price from which the premium was figured?

A. Yes.

MR. DICKINSON: That is all.

By MR. LINDABURY:

Q. Was this price higher than the quotations of the other concerns who did not quote for immediate delivery?

A. Oftentimes.

Q. Were you ever able to get the Carnegie to sell for immediate delivery in preference to their general trade, or did you never try?

A. No; they never would make you a better promise of delivery; they never would make you a delivery other than the general trade delivery. They never did accept any premium from us.

MR. LINDABURY: That is all.

MR. DICKINSON: That is all.

SOLOMON L. BUSCHMAN

was called as a witness on behalf of the defendants, and being first duly sworn, testified as follows:

DIRECT EXAMINATION

By Mr. Severance:

Q. You live in New York?

A. Yes, sir.

Q. What is your business?

A. I do the purchasing of the tin plate for Shalita Brothers.

Q. What is the business of Shalita Brothers?

A. Manufacturing tin cans of every description.

Q. Is that a business of pretty good size?

A. Yes, sir; they are considered one of the largest independents here in New York.

Q. What companies are the competitors of Shalita Brothers?

A. The American Can Company; the Continental Can Company; Clark Can Company of Philadelphia; William Bertels & Sons, Wilkesbarre, Pennsylvania.

Q. There are other can manufacturers, are there not?

A. Yes, sir; there are other can manufacturers, but they are not of as large size as those I have just mentioned.

Q. About what are your annual purchases of tin plate?

A. From 40,000 to 50,000 base packages per year.

Q. How long have you been with Shalita Brothers?

A. About seven and a half years.

Q. During that period from what tin plate manufacturers or jobbers have you purchased your requirements of tin plate?

A. Do you want the names of them?

Q. Yes.

A. The McKeesport Tin Plate Company; the Washington Tin Plate Company; Jones & Laughlin Steel Company; the Philips Sheet & Tin Plate Company. Do you want the jobbers also?

Q. Have you bought from the American Sheet & Tin Plate Company?

A. The American Sheet & Tin Plate Company. I think I have given them all there.

Q. Have you bought anything from Osterberg Tin Plate Company?

A. Yes; a good many years ago; away far back about six years ago.

Q. In determining where you would place your orders what considerations have you taken into account?

A. Price, delivery and quantity.

Q. About what percentage would you say of your requirements have you bought from the American Sheet & Tin Plate Company during that period?

A. We have not done much business with them up to the present year. We could not very well take as a fair basis what we have bought from them; we bought about 25 per cent. of our purchases this year from the American Sheet & Tin Plate Company. Up to that time we had not bought any amount of it—just odds and ends, here and there.

Q. You have bought chiefly from other people?

A. Chiefly from other people.

Q. In what way do you ascertain the prices at which you can secure tin plate when you desire to buy it?

A. By writing to the different mills and asking them what they have to offer.

Q. And then you place your orders, after that?

A. We have placed our orders where we could get the best quantity, quality considered, at the lowest prices.

Q. Has the market during these seven and a half years you have been in that business been an open competitive market or otherwise?

Mr. Dickinson: That is objected to as calling for a conclusion of the witness and incompetent.

By Mr. Severance:

Q. As far as you have observed?

A. It has been, as far as I have observed; it has been open.

Q. Do you use wire in your business also?

A. We do; we use coppered and bright wire.

Q. From whom have you bought your wire?

A. From independents.

Q. Have you bought any from the American Steel & Wire Company?

A. Nothing, with the exception of 1,000 pounds that we bought as a sample lot.

Q. What concern do you buy your chief wire supply from?

A. Igoe Brothers.

Q. Of Brooklyn?

A. Yes.

Q. In the case of both, wire and tin plate, have your purchases been made upon a competitive basis, or otherwise?

A. They have always been made upon a competitive basis.

CROSS EXAMINATION

By Mr. Dickinson:

Q. Who are Igoe Brothers?

A. They are wire manufacturers in Brooklyn.

Q. How long have they been making wire?

A. To my knowledge about ten or twelve years.

Q. What extent of output have they? Do you know?

A. I never looked into that. I know that we have always been able to get all the wire we could handle from them, and two or three other independents around here have been able to get all their wire from them.

Q. Do you handle special wire?

A. Not special wire.

Q. It is standard wire?

A. Other people use it.

Q. Is it what is known as a standard wire in the trade?

A. It is a standard wire.

Q. You said you used two kinds—coppered wire and bright wire?

A. Yes, sir.

Q. Are both of those standard, the kinds that you use?

A. Standard stock wires.

Q. What sizes do you use?

A. 10 of the bright; 11, 12, 13 and 14 of the coppered.

Q. What is your position with Shalita Brothers?

A. I do the buying and look after the sales in a general way.

Q. How long have you been with them?

A. About seven and a half years.

Q. How long have you held your present position?

A. I have been buying or helping toward the buying for the first four years of my position there. For the past three and a half years I have done the buying directly.

Q. For the last three and a half years you have done the buying?

A. Yes; I have done the buying personally.

Q. Who did it before that?

A. Mr. Shalita. I always got the prices in for him, and the quantities and other things; I got them ready for him and he passed on the price of them.

Q. You simply got the information for him?

A. I got the information for him, from the different mills.

Q. And he would pass on the prices and make the contracts?

A. Yes, sir.

Q. You had nothing to do with that?

A. On and off during his absence I did take care of it.

Q. But, generally speaking, during that time?

A. He had charge of it.

Q. You say you just began dealing with the American Sheet & Tin Plate Company in large quantities?

A. Yes.

Q. This year?

A. Yes.

Q. What is the wire used for, take the coppered wire?

A. It is used for bale hooks and handles of tin cans.

Q. How much of that do you buy a year?

A. How much do we use?

Q. How much coppered?

A. I cannot give you the exact figures on coppered; I know we have bought about four tons a month.

Q. That would be about 48 tons a year?

A. About that, roughly.

Q. And bright wire, what do you use that for?

A. We use that inside of the pails, to reinforce the top of them.

Q. How much of that do you use?

A. The amount I gave you included the bright wire; I understood you to say that you wanted the amount that was used of all wire.

Q. That includes coppered and bright?

A. Yes.

Q. Is any of this steel wire?

A. I do not know the process that it goes through; I don't know that. It is steel wire.

Q. That is the bright wire?

A. Yes.

Q. The bright is steel wire?

A. Yes; it is only coppered on the top.

Q. Coppered on the outside?

A. It is not copper; it is coppered wire, steel wire covered with copper.

By MR. SEVERANCE:

Q. Just one question. Counsel brought out from you that during the first three or four years you were with Shalita Brothers Mr. Shalita made the purchases?

A. He passed on the purchases; he did not make them, just passed on them. I got all of the facts and figures for him, and he passed on the price being right or not, and passed whether the contract should be awarded at that price.

Q. And you were familiar with the prices quoted by the different manufacturers at that time?

A. Yes.

Q. The same as you have been since?

A. Yes.

JOHN TROUNSTINE

was called as a witness on behalf of the defendants, and being first duly sworn, testified as follows:

DIRECT EXAMINATION

By Mr. Reed:

Q. Where do you live?

A. 450 West End Avenue, City of New York.

Q. What is your occupation?

A. Manufacturer of metallic beds and furniture.

Q. What is the name of your concern?

A. The Greenpoint Metallic Bed Company.

Q. Is that a corporation or a partnership?

A. A partnership.

Q. And are you one of the partners of that concern?

A. I am.

Q. How long has that partnership been in the business of manufacturing metallic beds?

A. Ever since 1896.

Q. How long have you been a partner in it?

A. Since 1896; the business was started in 1895.

Q. Are you familiar with the purchase policy of your firm?

A. I am.

Q. Who has charge of it?

A. At the present time Mr. Donovan, under my direction.

Q. Which of the partners of this firm has charge of the purchasing department?

A. I have.

Q. What varieties of steel products do you use in your business?

A. Angles, bars, rods, sheets and tubing.

Q. What kind of rods do you use; what kind of rods do you mean you use?

A. We use wire rods.

Q. What kind of tubing do you use?

A. We use a special welded tube called bedstead tubing.

Q. What is the difference between that and ordinary welded tubing?

A. The difference between that and ordinary welded tubing, the ordinary merchant pipe, is in the thickness of the wall; in other words, a lighter material, made from lighter skelp.

Q. What sort of welding, what sort of union, does that tubing have?

A. I think it is a butt-welded tubing.

Q. Do you use any tubing of the kind called "butted"?

A. Yes.

Q. I wish you would describe that.

A butted tube is a tube which is simply formed up and pressed together, leaving the seam open.

Q. It is not fit for conveying liquids?

A. No, sir; it is open on one side. That is, it has not been joined together; it is pressed together only.

Q. Do you use any lap-welded tubing?

A. No, sir.

Q. You said you did use butt-welded to some extent?

A. Yes; all our bedstead tubing is butt-welded, what is known as bedstead tubing is butt-welded.

Q. And you use butted tubing beside that?

A. We use butted tubing beside that, and we use a close joint or lock joint tubing.

Q. What is that made from?

A. That is made from sheets or sometimes skelp.

Q. It is very thin skelp?

A. Very thin, yes.

Q. Do you use any brazed tubing?

A. We also use brazed tubing.

Q. Are all these various varieties of tubing used for the same purpose?

A. They are used in the manufacture of bedsteads.

Q. Are any two of them interchangeable? Can you use one of them instead of the other?

A. Yes.

Q. And do you at times?

A. Yes.

Q. Are these different kinds of tubing among themselves in competition, so to speak?

A. Yes.

Q. Do the same manufacturers make all kinds of tubing?

A. Not to my knowledge.

Q. Take the National Tube Company, does that make any of this butted tube, so far as you know?

A. So far as I know, they have never offered any of it to me.

Q. Do they make any brazed tubing?

A. Never have sold any or offered any of it to me.

Q. Does it make any of this lock-joint tubing?

A. Not to my knowledge.

Q. Does it make butt-welded tubing?

A. It makes butt-welded tubing, yes.

Q. How much are your total annual purchases of tubes of all kinds, at the present time?

A. About $60,000.

Q. Can you express it in tonnage?

A. I should imagine that was from 1,000 to 1,200 tons.

Q. Have your purchases of tubing in the past been at a greater rate than that?

A. Yes.

Q. What is the maximum amount that you have bought in any year, as you remember?

A. I think about 15,000 tons.

Q. Why are your purchases of tubes less now than they have been in the past? Is your output smaller?

A. Our output in that particular branch is smaller, owing to the change in business conditions.

Q. From what companies do you get quotations on the different kinds of tubing that you use in beds? Can you give us a list of those companies that customarily submit quotations to you?

A. There is the National Tube Company, the Phoenix Tube Company, the Mohegan Tube Company, the Newark Tube & Metal Works, and the Standard Tube Company.

Q. How about the Pittsburgh Tube Company, or the Keystone Tube Company, have you ever heard of those?

A. Yes, the Keystone, and the Pittsburgh, and the Elyria Steel Company and the Danville Structural Tube Company.

Q. How do the quotations that come in to you from these concerns range; are they always uniform or are they variant?

A. They are variant.

Q. Do they vary also from time to time as well as at one particular time?

A. Yes, sir.

Q. How long has that been the case, Mr. Trounstine?

A. Ever since we have been buying tubes.

Q. Now, coming to these merchant mill products that you use, I think you said you use some bars, didn't you?

A. Yes, sir.

Q. Will you tell us the names of some of the concerns from which you have bought bars?

A. Jones & Laughlin, Carnegie Steel Company, Cambria Steel Company, Republic Iron & Steel Company.

Q. Does the Youngstown Sheet & Tube Company make any merchant bars?

A. I cannot recall whether they make bars or rods, but we have bought one or the other from them.

Q. For what purpose do you use these merchant bars?

A. They form the interior rods of the bedstead, the rods and the bars being interchangeable.

Q. Do you sometimes use rods for the same purpose?

A. Yes.

Q. Ordinarily a merchant bar is larger in diameter than a wire rod, isn't it?

A. Not those that we buy; we buy a wire rod from one-quarter of an inch—one-quarter, five-sixteenths, and three-eighths.

Q. And merchant bars are used for the same purpose?

A. We buy merchant bars in the same sizes and in addition to that we use one-half inch and five-eighths inch.

Q. Will you tell us some of the concerns from which you buy wire rods for that purpose?

A. From the same concerns that I have just mentioned that we buy bars from, also the American Steel & Wire Company.

Q. Do you buy also from Wickwire Brothers?

A. Also from Wickwire Brothers: yes, sir.

Q. How about the quotations that you receive on merchant bars and wire rods at any particular time that you have asked

for quotations, I mean on any particular request, do the quotations that you receive vary, or are they all the same?

A. They vary.

Q. How long has that been the case, Mr. Trounstine?

A. Ever since we have been in business we find that when the steel mills are full of business we get a higher price to which they adhere; when they want business they will make us quotations, and if they find they are not getting the business will ask us to wait, and probably submit a new quotation until we get a price which we consider satisfactory.

Q. Have these concerns that you have named salesmen that visit you?

A. Yes.

Q. Is there competition in any other respect than in mere price?

A. We look upon price, delivery and quality.

Q. Do they compete in those ways, too?

A. Yes.

Q. I did not ask you about your sheet purchases; for what purpose do you buy sheets?

A. We use them for table tops, and for the sides of dental cabinets, the tops of operating tables and kindred uses. We also use them now for making tubes.

Q. That is, you use these sheets?

A. We turn them into skelp practically, and then form them up into tubes.

Q. Making your own tubes?

A. Making part of our own tubes.

Q. How do your sheet purchases run in the course of the year, what tonnage do you buy annually?

A. Our use of sheet has grown in the last year considerably over what it was ever before.

Q. What were your purchases last year?

A. I think our purchases last year were about 200 tons, about in that neighborhood.

Q. Now, in your purchases of sheet steel what manufacturer did you buy from back in 1900?

A. From the Empire Steel Company.

Q. That has nothing to do with the United States Steel Corporation?

A. Not so far as I know; I think not.

Q. How long did you continue to buy from them?

A. We bought from them for a number of years, I think up to 1906, 7 or 8. I have just forgotten the year.

Q. Did other manufacturers of sheet steel solicit your business during that time?

A. We asked for quotations; yes, sir.

Q. Did the quotations that you received vary, or were they uniform?

A. Why, I think they varied.

Q. What was the important element which controlled the disposition of your sheet steel purchases?

A. It was quality.

Q. Why was that?

A. We wanted a sheet that was perfectly flat, one that was not buckled at all. As soon as a sheet buckled it was not fit for our use.

Q. And quality was really more important than price?

A. Quality was the important feature in respect to that particular item.

Q. When did you first buy sheet steel from the Steel Corporation?

A. I think it was in 1910.

Q. Why did you change from this Empire Steel Company to the Steel Corporation?

A. We were not getting satisfactory sheet, could not get it at the time, and we tried the American Sheet & Tin Plate Company and got a satisfactory sheet and bought their product.

Q. Have you bought from any other manufacturers besides those that you have named?

A. We have, sir; this year we have bought sheets also from Follansbee Brothers.

Q. Do you buy any angles?

A. Yes, sir.

Q. What are they used for?

A. They are used to bind the head and foot end, the two sides also, and also to furnish side rods for beds.

Q. When did you start to buy angles?

A. In 1896.

Q. Where did you get your angles for the first few years?

A. We bought them from various sources, among others the Carnegie Steel Company, and we bought them sometimes through local agents and did not know what mill they came from, but in 1897 or 1898, rather, we bought from Jones & Laughlin, and placed almost our entire requirements with them.

By Mr. Dickinson:

Q. What year was that?

A. In 1898.

Q. Down to the present time?

A. No, for several years.

By Mr. Reed:

Q. When did you cease to buy almost entirely from Jones & Laughlin?

A. I think it was in 1905.

Q. From what concerns have you bought your steel angles since 1905?

A. We have bought some from the Carnegie Steel Company, from the Sweet Steel Company, from the Buffalo Steel Company, from the Eckles-Xye Company.

Q. What percentage of your purchases of angles since 1905 has been made from the Carnegie Steel Company?

A. A very small percentage. I should say less than five per cent.

Q. From what companies do you ask quotations when you are considering the purchase of angles?

A. We ask anybody from whom we think we can get a reasonable price, principally among the Sweet Steel Company, Eckles, Buffalo Steel, and Carnegie Steel Company.

Q. Do the prices that are quoted you on angles vary?

A. They do.

Q. Or are they uniform?

A. They vary.

Q. How long has that been so?

A. Always.

Q. Could you give us some idea of the money value of the output of your company, of your firm each year, if you have no objection?

MR. DICKINSON: You mean in finished product?

MR. REED: In finished product.

MR. DICKINSON: Objected to as irrelevant.

THE WITNESS: I prefer not to state.

By MR. REED:

Q. Do you prefer also not to state the money value of your firm's purchases of all kinds of products in the year, or would you rather not give that?

MR. DICKINSON: You mean in steel products?

MR. REED: I mean all kinds, steel and otherwise.

THE WITNESS: No, I do not.

MR. DICKINSON: I object to that; anything except what has reference to steel and steel products.

By MR. REED:

Q. Will you answer, please?

A. About 600,000 tons.

Q. You buy a good many kinds of material, do you not, Mr. Trounstine?

A. Yes, sir.

Q. Do you think you know competition when you see it?

A. I think I do. I know we do when we feel it.

Q. You have had experience with competition in both ends, have you?

A. Both ends, yes.

Q. In these different steel products that you have bought for your business, has there been, for the past ten years, active and genuine competition?

MR. DICKINSON: I object to that as calling for the conclusion of the witness.

THE WITNESS: I think so.

CROSS EXAMINATION

By Mr. Dickinson:

Q. You have only testified so far as purchases of your concern are concerned; that is all your testimony has reference to?

A. That is all.

Q. You are not speaking of any other conditions, or anybody else's experience in regard to that?

A. No, sir.

Q. It is confined solely to your business?

A. Exactly so.

Mr. Dickinson: That is all.

Mr. Reed: That is all.

FRANKLIN L. GROFF

was called as a witness on behalf of the defendants, and being first duly sworn, testified as follows:

DIRECT EXAMINATION

By Mr. Lindabury:

Q. Are you connected with the steel industry in any way?

A. As a purchaser.

Q. Of what?

A. Tubing, rods, angles, mattress wire.

Q. Are you connected with more than one concern which purchases those articles?

A. Yes.

Q. What are they? What are the names of them?

A. The Mersereau Metal Bed Company; Foster Brothers Manufacturing Company, Baltimore; J. R. Bunting Bedding Company, Philadelphia; Gasau-Thompson Bedding Company, Brooklyn.

Q. How long have you been connected with these concerns or some of them?

A. About 20 years.

Q. Have you had to do with the purchase of the materials you have mentioned for these concerns or any of them?

A. It is done under my supervision.

Q. How long has that been the case?

A. About 20 years.

Q. How much mattress wire do you buy? When I say "you" I mean these different concerns, in so far as you represent them.

MR. DICKINSON: You mean the different ones, or all of them?

MR. LINDABURY: All of them together, in so far as he has represented them.

THE WITNESS: Including spring wire somewhere in the neighborhood of 500 tons to 800 tons.

By MR. LINDABURY:

Q. A year?

A. Yes; mattress wire and spring wire.

Q. Where have you bought your mattress and spring wire?

A. Mainly from the American Steel & Wire Company.

Q. What percentage of your requirements have been bought from that company?

A. Approximately 75 per cent.

Q. Where did you get the rest?

A. From the Cambria Steel Company; John A. Roebling's Sons Company.

Q. Has this percentage of purchases been about the same during the last ten years, or has it varied in different years?

A. I think approximately it is about the same.

Q. It has run pretty much alike?

A. I think so. It varied slightly. I would not be able to tell exactly.

Q. What is this mattress wire that you allude to? Is it a copper wire, a steel wire, tinned, galvanized or otherwise? What is it?

A. It is a tin-coated wire.

Q. It is a standard product?

A. I so understand.

Q. How do you buy that; on a competitive basis or otherwise?

A. On a competitive basis.

Q. Do you buy on solicitation or upon inquiry for prices?

A. Mainly through solicitation.

Q. Of the salesmen of these different concerns?

A. Representatives of the sales departments.

Q. Are you visited by these salesmen from time to time?

A. We are.

Q. Of some or all of the companies you have named?

A. I think practically all.

Q. Have the quotations received for this wire been uniform or variant?

A. They have varied.

Q. During all this period?

A. I believe so.

Q. Has there been competition with respect to that wire in anything but price?

MR. DICKINSON: Objected to as calling for a conclusion of the witness.

MR. LINDABURY: The question is withdrawn.

By MR. LINDABURY:

Q. In determining your purchases, have you had regard to anything but price?

A. We consider service.

Q. Anything else? Has the quality been about the same of the different manufacturers, or has that varied also?

A. It varies as to quality.

Q. And do you take that into account?

A. We do.

Q. Do you buy tubes?

A. Yes, we do.

Q. What for?

A. For spring beds and for bedsteads; steel bedsteads.

Q. Are your purchases of tubes considerable or not?

A. Yes; perhaps they might be so considered.

Q. How much in tonnage?

A. I do not know the exact tonnage very well.

Q. Could you estimate in value better?

A. About $75,000 to $100,000.

Q. Do you purchase your tubing also on a competitive basis?

A. We do.

Q. Who are the manufacturers of the tubing that you buy?

A. The National Tube Company, the Pittsburgh Tube Company and the Danville Structural Tube Company.

Q. You get quotations from all of them?

A. We do.

Q. Are your purchases made on a yearly basis or from time to time according to your requirements for the time?

A. Every six months we usually make contracts.

Q. Covering your requirements for the next six months?

A. Yes.

Q. Do you invite quotations for those requirements?

A. We do.

Q. From all of these concerns or only some of them?

A. From all of them.

Q. And in regard to tubing, are those quotations variant or uniform?

A. They vary.

Q. Has that been so during the latter period of ten years?

A. I think so, yes.

Q. You also buy rods?

A. Yes, in the coil mainly.

Q. From whom do you buy them?

A. The Cambria Steel Company and one other concern, the American Steel & Wire Company perhaps a very small amount.

Q. Are those also bought on a competitive basis?

A. They are, yes.

Q. And the quotations on those? Are they variant or uniform?

A. They vary.

Q. Has that been so during the latter period of ten years?

A. I believe so.

Q. Have you observed anything to indicate combination between the manufacturers of any of these products as to either price or output?

MR. DICKINSON: Objected to as calling for a mere conclusion of the witness.

THE WITNESS: Shall I answer?

MR. LINDABURY: Yes.

THE WITNESS: Not to my knowledge.

By MR. LINDABURY:

Q. Have you ever seen anything to indicate that there were any combinations either to fix or maintain prices or regulate output?

MR. DICKINSON: The same objection.

THE WITNESS: I have not.

MR. LINDABURY: Take the witness.

CROSS EXAMINATION

By MR. DICKINSON:

Q. You mean you have not seen anything that would indicate it? Do you mean you have seen nothing in the trade journals or public press, and never heard of any combinations or pools among any of the makers of any of these products that you have bought within the last ten years?

MR. LINDABURY: I object to that question as not cross examination. The witness was not asked what he read, but he was asked whether in his trade he has observed anything of that kind.

THE WITNESS: I think I have read newspaper articles more or less.

By MR. DICKINSON:

Q. To the effect that there were pools and combinations among the makers of these various articles of which you have spoken as having dealt in during the last ten year period?

A. I cannot say as to that.

Q. You cannot say as to what?

A. I have no knowledge of reading anything in the papers just to that effect, as to combinations or pools in that way.

Q. And no knowledge that you have not read anything about pools among any manufacturers?

A. Just in a general way; I would not be competent to answer that clearly.

Q. But you have read it, have you not?

A. I have read more or less in that direction.

Q. And you have read it in the trade journals?

A. I am not clear on that, in trade journals.

Q. Not clear on that?

A. We take the Iron Age and one or two other papers, but personally I do not read them.

Q. You do not read the Iron Age?

A. No.

Q. Although you are purchasing agent for these various concerns you do not read the Iron Age?

A. I am not the purchasing agent.

Q. You direct the purchases?

A. I direct the purchases.

Q. Then I will put the question in that way. Although you have directed the purchases of these various articles for upwards of ten years, from these various concerns manufacturing these various products, you say you do not read the Iron Age?

A. No, I do not read it to any extent.

Q. That is where the prices are current, are quoted daily, is it not, in the various iron and steel products of the United States?

A. They are. But we get our information direct from representatives of the various companies.

Q. And you do not look to publications of accepted trade journals?

A. No, we do not accept them.

Q. I did not ask whether you accepted them; I asked if you read them and read what they say about it?

A. We think we have a better way of getting at it, a little easier way.

Q. You say you think you have a better way. Will you please answer the question as to whether you read them or not?

A. No; I cannot say that I do. I just pick the paper up casually, and I am not posted through trade publications.

Q. Then I understand that you do not read them in the journals?

A. Not very much.

Q. These different concerns that you have named, have you represented all of these different concerns throughout this period that you spoke of, twenty years?

A. They are not all twenty years old.

Q. That is what I wanted to get at. Take them up, each one, and state where they are located, how long you have been representing each one. Just give the names and locations and how long you have been representing each one.

A. Foster Brothers Manufacturing Company, of Baltimore, is the oldest of the concerns.

Q. How long have you represented that?

A. Since the organization, about twenty years ago.

Q. What is the next one?

A. The next one, I believe, is J. R. Bunting Bedding Company.

Q. Where is that?

A. That is in Philadelphia.

Q. How long have you represented that?

A. Since the incorporation of the company.

Q. How long ago was that?

A. About eight years.

Q. What is the next one?

A. These companies, I might say, were taken over. The Bunting is quite an old concern, dating back to 1876. We purchased it and incorporated it; likewise the Gasau-Thompson Company. That is a new incorporation, only last year, but an old company.

Q. What was the old company?

A. The Gasau Spring Bed Company, and formerly C. Gasau.

Q. How long have you represented that?

A. Since the incorporation.

Q. When was that?

A. About six years ago, roughly speaking.

Q. You have mentioned three; what others are there?

A. The Mersereau Metallic Bed Company.

Q. Where is that situated?

A. Jersey City.

Q. How long have you represented that?

A. Since incorporation in 1908.

Q. You have represented that since 1908?

A. Yes.

Q. Do you represent any others?

A. There is a new company that we established in Boston about a year and a half ago.

Q. What is that?

A. The Continental Bedding Company.

Q. How long have you represented that?

A. Since the incorporation.

Q. When was that?

A. About a year and a half or two years ago.

Q. Any others?

A. That is all.

Q. Now, what position do you hold with the Foster Brothers Company?

A. I happen to be the president of the company.

Q. You are president of that company?

A. Yes, sir.

Q. How long have you been president of the company?

A. Since the incorporation—I beg your pardon, about ten years since the incorporation.

Q. With the J. R. Bunting Bedding Company what position do you hold?

A. President of the company since its incorporation.

Q. How long have you been president of that?

A. Since the incorporation.

Q. The Gasau-Thompson Company?

A. Since incorporation.

Q. What position do you hold in that company?

A. President.

Q. Of the Merserean Company?

A. Likewise.

Q. You are the president of that?

A. Yes.

Q. And the Continental Bedding Company?

A. Yes, sir.

Q. What position do you hold with that?

A. President of the company.

Q. You are president of that?

A. Yes, sir.

Q. You buy for all of these concerns, or rather direct the buying?

A. Direct the buying.

Q. And have been doing so for the period that you mentioned here?

A. Yes, sir.

Q. Well, now, you buy different things for these different companies, or how much of these purchases that you have mentioned would apply to some and not to others; in other words, what I want to get at is, what you purchase is used generally by all of them?

A. Yes; many of the materials are used by all of them.

Q. They are in the same line of business, are they?

A. Yes.

Q. These steel materials that you purchase, were not they for the most part specialties for beds?

A. Specialties?

Q. Yes, what is called specialties.

A. I would not consider so.

Q. Used for the special purposes of bedding?

A. For our special needs.

Q. Were they standard articles in the market?

A. I so consider that they were standard in the market.

Q. Do all of these purchases that you use belong to any standard types, or are a good many of them specially used for your business?

A. Well, mattress wire, I believe, is only used for the construction of spring beds; I do not know as it is used in any other article of manufacture.

Q. Are they smaller than the angles used in construction work for buildings?

A. I think some of the construction angles are the same weight and size.

Q. But in general, these are very much smaller than anything used in any building structure?

A. Taken as a whole they are smaller.

Q. You spoke of tubes; what part of your tubes do you buy from the National Tube Company?

A. Something between 60 and 75 per cent.

Q. How long have you been doing that?

A. Since we have been making bedsteads.

Q. What kind of rods are these that you speak of?

A. They are quarter-inch size up to a half-inch coil rods.

Q. What are they used for?

A. They are used for what we call filling rods in the steel bedsteads.

Q. From whom do you buy most of them?

A. The Cambria Steel Company.

Q. What percentage does that bear to your whole tonnage of iron and steel purchases, or in money value what?

A. As an estimate, I should not think it would be over 15 per cent.

Q. Now, you speak of prices being varying. What do you mean by that? Do you mean that there were periods in these ten years when the prices varied from other periods, or if not that, just explain what you mean when you use the expression "prices were varying"?

A. We receive the various quotations and they are not equal; they vary in price.

Q. Were any of these articles that you purchased known as standard articles, and were they such as in relation to which base prices were quoted in the journals and papers which publish prices of these articles for the trade?

A. I do not understand it so, no.

Q. How?

A. I do not understand it in that respect.

Q. You do not understand it is standard in that respect?

A. No.

Q. And when you spoke of them being standard, you did not mean it in that respect?

A. No; standard to our business.

Q. Standard to your own business?

A. Yes.

Q. And not standard as known in the market by the market standard?

A. No.

MR. DICKINSON: That is all.

RE-DIRECT EXAMINATION

By MR. LINDABURY:

Q. Is there a large use of this mattress wire in this country?

A. Yes. It would be hard for me to estimate the tonnage, it is used all over the country.

Q. Are there many manufacturers of wire beds who are using this wire?

A. Yes, there are a good many.

Q. Could you estimate the number roughly?

A. Upwards of 100 manufacturers over the country.

Q. How many have you got right here in the metropolitan district?

A. Why, perhaps 12 or 15.

MR. LINDABURY: That is all.

MR. DICKINSON: That is all.

MR. LINDABURY: Mr. Northrop.

HENRY S. NORTHROP

was called as a witness on behalf of the defendants, and being first duly sworn, testified as follows:

DIRECT EXAMINATION

By MR. LINDABURY:

Q. Are you in business in this city, Mr. Northrop?

A. Yes.

Q. The name of your concern, please?

A. The Northrop, Coburn & Dodge Company.

Q. Are you the Mr. Northrop whose name has been used by the corporation?

A. Yes, sir.

Q. Where is your place of business?

A. 40 Cherry Street.

Q. What do you manufacture?

A. Stamped steel ceilings.

Q. How long have you been doing that?

A. Oh, manufacturing ceilings 34 years; manufacturing stamped ceilings about 25 years.

Q. What did you say, stamped ceilings?

A. Yes.

Q. What do you make those ceilings of?

A. It is sheet steel.

Q. How much sheet steel do you consume a year in your business?

A. About 500 tons.

Q. 500 tons?

A. Yes, sir.

Q. How much will a ton cover?

A. A ton will cover about 4,000 square feet.

Q. Is your business the same size as it was ten years ago, or has it changed?

A. It is very much the same.

Q. Has it grown any, I mean?

A. It has grown a little.

Q. Are there others manufacturing stamped steel ceilings?

A. Yes, sir.

Q. In the country?

A. Yes, sir.

Q. How many manufacturers of those are there?

A. I do not know how many there are; I think 25 or 30.

Q. Are there others in this district?

A. Yes.

Q. About how many in the metropolitan district?

A. There are two others in the metropolitan district.

Q. Where do you get your sheet steel?

A. I get it from various sources.

Q. Do you buy any from the American Sheet & Tin Plate Company?

A. Yes, sir.

Q. What percentage of your requirements do you get there?

A. That varies every year; sometimes 90 per cent., sometimes 40 per cent.

Q. How many manufacturers of sheet steel are there in the market offering you goods, offering the goods you buy?

A. That I do not know.

Q. Do any besides the American Sheet & Tin Plate Company offer to supply your needs?

A. Yes, sir; quite a number.

Q. Who?

Before you answer that, how do you obtain these offers? Do their salesmen wait on you?

A. Their salesmen call to see me; and if they do not call when I want them to, I write to the people I have bought from before.

Q. How many manufacturers do you communicate with in that way, either by correspondence or receiving visits from their salesmen?

A. The last few years I have bought from a dozen different concerns.

Q. A dozen?

A. I think so; eight or ten or ten or twelve.

Q. Do you buy on a yearly basis, or order from time to time when your stock gets low and needs replenishing?

A. Well, I usually buy nearly enough for my anticipated wants, for six months.

Q. That is what you try to do?

A. That is what I try to do; but I almost always buy something during that time also; some extra material.

Q. When you find you are ready to buy, do you write for quotations?

A. I usually do write to two or three parties with whom I prefer to deal, unless their representative has been to see me within a quite recent period.

Q. Do you obtain quotations in that way?

A. Yes.

Q. How long has that been your practice?

A. For a great many years.

Q. During the last ten years have or not quotations received in answer to such inquiries been uniform or variant?

A. I think there has always been some variation.

Q. Have you bought or not on a competitive basis?

A. I have always bought on a competitive basis.

Q. According to where you could buy the cheapest?

A. The same as I would buy anything else.

Q. Has there been any time during the past ten years when competition was not keen between the manufacturers of this sheet steel which you use?

MR. DICKINSON: That is objected to as calling for a conclusion of the witness.

THE WITNESS: Oh, I think when they were busy it was not keen, and when they were short of orders it was quite keen.

By MR. LINDABURY:

Q. How was that manifested to you?

A. According to the competition there was.

Q. Did the mill that was full quote generally higher prices than the mill that was running low on orders?

A. I think they did.

Q. And would, therefore, the quotations of a concern be higher at one time and lower at another time than the others?

A. Yes, sir.

Q. And it ran along in that way, did it?

A. Yes, sir; not a great deal of variation, but with the same amount of variation there would be in buying lumber or paint or any other materials which are sold on a close margin.

Q. Are these standard articles that you bought—this sheet steel? Is it a standard article?

A. It has become a standard article, yes.

CROSS EXAMINATION

By Mr. Dickinson:

Q. When did it become a standard article?

A. Since it was used extensively for this purpose.

Q. How long has that been?

A. About twenty years.

Q. What do you mean by a standard article, in the sense in which you use that term?

A. I would mean by standard article, one that is made by quite a number of different concerns in approximately equal quality.

Q. Have there been prices quoted in the market on any such commodity as standard prices?

A. We never can depend upon the prices quoted in the journals, I think.

Q. I did not ask you whether you could depend on them at all. I asked you whether they are quoted as prices on a standard article?

A. They are quoted, but we place no confidence in them.

Q. Then they are quoted?

A. Yes; I think they are quoted.

Q. And are quoted by standard and reputable journals, are they, or papers that represent the trade?

A. I suppose they are called standard papers, yes.

Q. What papers are they quoted in?

A. I do not look to see the quotations in the papers except very rarely. Once in a while I pick up the Journal of Commerce and read that a little about prices.

Q. Generally you do not read the quotations on those subjects?

A. I look at those in the Journal of Commerce more than I do those in any other journal.

Q. Does the Journal of Commerce quote regularly standard prices——

A. I think very nearly right, yes.

Q. Wait a minute until I get through.

Does the Journal of Commerce quote regularly standard prices on such sheet steel as you have been speaking of?

A. I do not know whether their prices are standard or not.

Q. Then do you read any journal that quotes standard prices upon the kind of sheet steel that you have been testifying about? If so, what journal is it.

A. I do not read any journals like that.

Q. You said a moment ago that the prices were pretty nearly right. What prices were pretty nearly right?

A. Prices that I have seen sometimes in the Journal of Commerce. At other times they were not right, according to my idea.

Q. Were they published regularly in the Journal of Commerce?

A. Yes; I think so; every day.

Q. Then you saw them every day?

A. No; I never read the paper every day.

Q. How do you know they were published every day, then?

A. I do not know that.

Q. When you stated they are published every day you were stating something that you really do not know, were you not?

A. I believe that the paper is published every day; and every day that I——

Q. I am asking you what you know about it. I am trying to get at what you know about it. Do you know whether it is or not?

A. I think it is published every day except Sundays.

Q. Do you get that idea by seeing it every day?

A. I do not see it every day, no. Still I may see it on the news-stands every day, too. I think I have done that.

Q. You mean you see the paper on the news-stands every day?

A. Yes.

Q. Seeing it on the news-stands is the only basis you have for stating that the prices are published every day?

A. I know whenever I buy it I find the prices published.

Q. Whenever you buy it?

A. Yes.

Q. How often is that?

A. It is very irregular.

Q. In speaking of variations of prices, you said there was always some variation. Would that variation oscillate about some common standard?

A. Yes.

Q. What would that common standard be?

A. It would be the approximate price for the period or time.

Q. The approximate price for the time?

A. Yes.

Q. As published in the journal?

A. Yes; it would approximate to the price stated in the journal.

Q. These variations: To what extent would they go?

A. One or two dollars a ton.

Q. Would they depend sometimes on the question of delivery?

A. Yes; sometimes it was a question of delivery, and at other times whether the mill I was dealing with was busy or not, I suppose.

Q. It varied somewhat at times when business was short, you said?

A. I believe it did, yes.

Q. When business was constant and normal, how would it be?

A. There was always some consideration upon which I would base my orders.

Q. There are times, are there not, in the trade of these particular articles to which you have referred, where business goes on for a long time without any serious disturbance one way or the other, and then there are other times, are there not, where owing to certain market conditions or general conditions of the country, it is affected one way or the other, in the way of depreciation or in the way of inflation?

A. Yes.

MR. LINDABURY: One moment, before you say yes; hear the whole question. The Judge has a way of asking questions so long that you have a way of answering them before you hear the end of them.

Mr. Dickinson: Then I will ask the stenographer to read the question to him again, and I will ask him if he has anything more to add to the answer.

(The question was repeated by the stenographer.)

By Mr. Dickinson:

Q. Do you want to add something to that answer?

A. I think the market has sometimes a downward tendency, and sometimes an upward tendency, and sometimes it is pretty steady.

Q. Pretty steady for long periods?

A. A few months.

Q. During such periods as that, would there be much variation in prices?

A. There is always a little, I find.

Q. There is always a little, you find?

A. Yes.

Q. You are only speaking of your personal experience?

A. Yes.

Q. And not outside of that in any general way?

A. No.

Q. How long have you been buying from the American Sheet & Tin Plate Company?

A. I think ever since they organized, I believe.

Q. And back of that, did you buy from the American Tin Plate Company and also from the American Sheet Steel Company?

A. Before the American Sheet & Tin Plate Company?

Q. Yes.

A. Before that I bought of a mill that I think joined in with the American Sheet & Tin Plate Company.

Q. What mill was that?

A. One at Scottdale, Pennsylvania.

Q. You have in your mind, have you not, before the Steel Corporation was formed?

A. Yes.

Q. I am calling your attention to another event.

A. No, the American Sheet & Tin Plate Company was formed before the Steel Corporation, as I remember it.

Q. But I am calling your attention to a later absorption or union of the American Sheet Steel Company under the name of the American Sheet & Tin Plate Company.

A. Since they were organized as a company by that name.

Q. How far back is that, do you know?

A. I should say in 1898 or 1900, I do not remember that.

Q. At any rate, since that company was taken over by the United States Steel Corporation you have been buying from it, have you?

A. Yes.

Q. And you have been buying about 90 per cent. a year?

MR. LINDABURY: He did not say that.

THE WITNESS: Sometimes 90; sometimes 40, perhaps. I think a few years perhaps nothing at all, one or two years.

By MR. DICKINSON:

Q. Take the year 1911, how much did you buy of them?

A. I cannot tell without looking at my books.

Q. You are talking about sheet steel now, are you?

A. Yes.

Q. Take 1912, how much did you buy from them?

A. I am afraid I cannot give you a correct answer on that.

Q. Can you give an answer for any year?

A. I can remember pretty well this year.

Q. Now, the years that you bought 90 per cent. from them, from whom did you get your other percentage?

A. Sometimes from one mill; sometimes from another mill, and sometimes from three or four other mills.

Q. Can you give the names of the concerns from whom you bought that other ten per cent. in the years when you got 90 per cent. from the American Sheet & Tin Plate Company?

A. No, I cannot tell which mill it was that I bought the balance from in that year.

Q. Were not those little short, hurry orders, to fill up gaps in the business that you did not anticipate?

A. No, sometimes we would buy six months' supply from some mill.

Q. When you bought 90 per cent. that year from the American Sheet & Tin Plate Company, would you buy a six months' supply from some other company?

A. No; then I would buy a few cars, or 25 or 50 or 100 tons from somebody else, because perhaps they offered me an inducement.

Q. Were not they to fill up as emergency arose, after you had contracted for 90 per cent., when you got this ten per cent.? What occasions were they that called for these purchases of ten per cent.?

A. Sometimes I needed something over what I had contracted for.

Q. Would not the American Sheet & Tin Plate Company furnish you that?

A. Probably they could.

Q. You do not know whether they could or not?

A. No.

Q. Did you apply to them to do it in those instances?

A. Sometimes I may have done so; at other times I did not do so.

Q. Have you any recollection about it one way or the other now?

A. I think when I did buy 90 per cent. from the American Sheet & Tin Plate Company I did not buy ten per cent. from any other company, unless someone came and offered me quite a reduction in price.

Q. That would be some particular occasion, would it?

A. Some particular occasion, yes.

Q. Those, then, were not when bids were being solicited generally, but only when some particular person came in and offered you special inducements, was it?

A. Yes.

Q. Did you have any contracts with the American Sheet & Tin Plate Company, the American Sheet Steel Company, or the American Tin Plate Company running longer than a period of a year?

A. No, sir.

Q. Did you have any running as much as six months with them.

A. Yes.

Q. How many contracts did you have with either of those

companies, or all of them, running as much as six months in that period?

A. In the period of ten years?

Q. In the period of ten years.

A. That I cannot tell exactly without looking up the contracts.

Q. Were they written contracts?

A. Yes.

Q. Were they contracts based upon the amount of the requirements that you used?

A. Yes.

Q. Did those contracts make the price in any way dependent upon your taking your requirements from them?

A. No.

Q. Or a certain percentage of your requirements?

A. No.

Q. Well when you said they were based as I understood you, on requirement, what did you mean?

A. On our anticipated wants; that is, they would ask me how much sheet I wanted to buy, or how much could they sell to me, and I might say, "Well, I will be needing 200 tons in the next six months; what can you sell it for?" and when we came to terms, that would be written down in the form of a contract.

Q. Did you make no contracts at all with either of these companies under which the price was based upon your requirements or a certain percentage of your requirements?

A. Not in my time, I have not done it; and I do not know of its being done. I was away in Germany from 1904, 1905, 1906, and a part of 1907. I cannot speak of that time because I do not remember.

Q. Then your testimony has not covered that period at all, has it?

A. My testimony has not covered that period while I was out of the country, no.

Q. And where you spoke of variant prices within the last ten years, why, it does not include that part of the last ten years?

A. No, it does not, because at that time I did not take an active interest in the business.

Q. And you do not understand that your testimony applies to any period embraced in the time you have just named?

A. I went away the 1st of February.

Q. Please state again what year it was?

A. 1904, and I had no active part in the business until October, 1907, although I was president of the company during that time.

MR. DICKINSON: That is all.

REDIRECT EXAMINATION

By MR. LINDABURY:

Q. You brought the panic back with you, then?

A. Yes. I was just in time to see it.

Q. Now, in these contracts with the Sheet & Tin Plate Company, did they or their representatives ever try to prevent you from buying anything you wished from their competitors?

A. No, sir.

Q. Did they ever refuse to sell you anything because you did not buy your total supplies from them?

A. No, sir; not to my knowledge.

Q. Speaking of trade quotations in the newspapers, which you say you saw from time to time, did you ever find that they corresponded at all closely with the actual quotations you received?

A. I think in some papers they did and in some other papers they did not.

Q. In which papers did they correspond?

A. I thought those quotations in the Journal of Commerce were the closest to the market.

Q. To what?

A. Were the closest to what I was obliged to pay.

Q. And they did vary from the actual quotations very often a dollar or two a ton, did they not?

A. Yes, sir.

Q. So you said?

A. Yes.

Q. And that was according to the general run, wasn't it, of the quotations?

A. Yes.

Q. Sometimes they would be the same, sometimes they would vary up or vary down a dollar or two a ton?

A. Yes.

MR. LINDABURY: That is all.

RECROSS EXAMINATION

By MR. DICKINSON:

Q. What about the Iron Age?

A. I have not seen the Iron Age regularly for several years.

Q. Do you read the quotations there?

A. I do not see it regularly. It comes to me occasionally, but I do not pay much attention to the quotations in that.

MR. DICKINSON: All right.

By MR. LINDABURY:

Q. Why not?

A. I have not found them of any value to me.

MR. LINDABURY: That is all. That is a very good reason.

JOHN LEWIS HAY

was called as a witness on behalf of the defendants, and being first duly sworn, testified as follows:

DIRECT EXAMINATION

By MR. LINDABURY:

Q. Mr. Hay, where do you live?

A. Newark, New Jersey.

Q. And your business?

A. Structural steel and iron.

Q. With what concern are you connected?

A. Hay Foundry & Iron Works.

Q. How long has that been in existence?

A. As a corporation since 1894.

Q. Prior to that what was it, a co-partnership?

A. A co-partnership.

Q. When was it founded?

A. 1830.

Q. By whom?

A. By my grandfather, James B. Hay.

Q. Is he still living?

A. No, he is dead.

Q. Did your father succeed him in business?

A. He did.

Q. I think he is still alive, is he not?

A. He is still alive.

Q. Is he president of your company?

A. He is president of our company.

Q. And do you hold an office?

A. Yes, sir.

Q. What office?

A. Secretary and treasurer.

Q. How long have you been personally connected with the business?

A. Approximately thirty years, a little less, twenty-eight years.

Q. What is the business of your concern? You mentioned, I think, structural work.

A. Yes.

Q. Is it that exclusively or practically?

A. The larger percentage; we do foundry work also, and also ornamental work.

Q. What percentage of your business is structural, roughly?

A. Roughly I should say eighty per cent.

Q. What do you do, do you fabricate?

A. Fabricate and erect.

Q. And where do you erect, in the metropolitan district alone?

A. Oh, no; wherever we can secure business that is advantageous.

Q. Over how wide an area of country?

A. Well, we do try to confine ourselves to the metropolitan district.

Q. I see. What is your annual tonnage?

A. Structural?

Q. Yes.

A. From thirty to forty thousand tons.

Q. In mentioning the metropolitan district a while ago and saying that you try to confine your business within that district, what did you include outside of Greater New York?

A. Newark, Jersey City, Hoboken; that is about all.

Q. And nearby?

A. Nearby.

Q. Who are your competitors in the erection of steel structures?

A. They are legion; it would be hard to say.

Q. Can you name a few of the leading ones?

A. Yes.

Q. Please do so.

A. Post & McCord, Levering & Garrigues, Hinkle Iron Works, Bradley Steel Construction Company.

Q. That will do, I think. Do you fabricate anything more than you erect?

A. Yes, we do.

Q. About what percentage of your fabrications do you erect?

A. It is variable from year to year, but I would say on an average we erect probably eighty per cent. of that which we fabricate.

Q. Where do you obtain the material for your fabrication, and how?

A. We obtain it from the various steel mills, usually on solicitation; that is the larger portion on solicitation.

Q. Are you in the habit of buying for each order you have or each contract you have, or do you buy for the supply of a particular period?

A. Usually for each contract.

Q. And of what concerns do you request quotations, ordinarily, I mean?

A. Why, we usually get two or three quotations, sometimes more than that.

Q. From what concerns usually?

A. From the Bethlehem Steel Corporation, Eastern Steel, Carnegie, sometimes Cambria.

Q. Are your purchases made on a competitive basis?

A. They are.

Q. Who does the buying for your concern?

A. I buy the larger items.

Q. How long have you been making the larger purchases.

A. Probably fifteen years.

Q. During the last ten years have the quotations you have received in response to these inquiries been uniform or variant?

A. They have been variant.

Q. Has that been the course generally throughout the whole period of ten years that they have been variant?

A. Yes, they have been variant.

Q. In awarding your contracts what do you take into account, if anything, besides prices?

A. Delivery usually.

Q. And quality, or is the quality fairly uniform?

A. Quality is very uniform.

Q. So your purchases are determined by consideration of deliveries and prices?

A. Primarily prices and delivery.

Q. And has the competition of these different concerns that you have named extended to both deliveries and prices, or chiefly to prices?

A. I should say to both.

Q. To both?

A. Yes, sir.

Q. And have you been able ordinarily to get a better price by negotiations than the mere acceptance of the lowest one of the prices quoted?

A. Almost uniformly.

Q. And has that been the case during the whole ten years?

A. Yes, sir.

MR. LINDABURY: Take the witness.

MR. DICKINSON: It is after four o'clock now. We will adjourn until to-morrow.

MR. LINDABURY: Well, Judge, the nature of the business of this witness is such that it is very inconvenient for him to attend in the morning. Would it be agreeable to you to cross examine him in the afternoon?

MR. DICKINSON: Certainly, I will accommodate the witness in that regard.

(Whereupon an adjournment was taken until to-morrow, Tuesday, October 21, 1913, at 10:30 o'clock a. m.)

NINETY-NINTH DAY.

EMPIRE BUILDING,
71 Broadway, New York City.

Tuesday, October 21, 1913.

Before Special Examiner JOHN ARTHUR BROWN.

Present on behalf of the United States, MR. DICKINSON and MR. COLTON.

Present on behalf of the Defendants, MR. LINDABURY, MR. SEVERANCE, MR. BOLLING and MR. REED:

MR. DICKINSON: Counsel for the Government waives the cross examination of John Lewis Hay, the witness on the stand at the taking of the adjournment yesterday.

JOHN P. CURRY

was called as a witness on behalf of the defendants, and being first duly sworn, testified as follows:

DIRECT EXAMINATION

By MR. LINDABURY:

Q. Where do you live?

A. Riverside, Connecticut.

Q. What is your business?

A. I am a member of the firm or co-partnership of Clifford L. Miller & Company, and president of the John P. Curry Manufacturing Company.

Q. When was the Miller firm formed?

A. In 1897.

Q. What has been its business?

A. Manufacturers of plaster and plastering materials.

Q. Did they at any time do any iron business or steel business?

A. No.

Q. What is their relation, if any, to the John P. Curry Manufacturing Company?

A. I secured a patent on a device for using wire for tying bags, and also tying reinforcing rods. This for some time was a department of Clifford L. Miller & Company, and then grew to such proportions that we incorporated the John P. Curry Company.

Q. When was that patent taken out?

A. It was granted January 5, 1909.

Q. When was the John P. Curry Manufacturing Company incorporated?

A. June 12, 1913.

Q. Just recently, then?

A. Just recently, yes.

Q. When was the business begun, the business of manufacturing by the Miller Company under the patent?

A. Immediately succeeding the grant of the patent.

Q. What material do you use, or did the Miller Company use, in the carrying on of its business?

A. Bright annealed wire.

Q. Please tell us again just what they make out of that wire.

A. We make a wire tie that we use, the largest part of the business, for tying bags, taking the place of string, which has heretofore always been used.

Q. How much wire do they use a year in that business?

A. I should say between 300 and 400 tons of wire a year.

Q. Where do you get your supplies?

A. We have gotten our supplies since beginning the manufacture of these wire ties from only two sources, Igoe Brothers, Brooklyn, who are the agents for Wickwire Brothers, of Cortland, New York, and the American Steel & Wire Company.

Q. How have you made your purchases; on yearly contracts or in some other way?

A. When we first started in, we simply bought on the market, but as our requirements increased, we then bought by contract.

Q. When did you first buy by contract, which year?

A. 1911.

Q. And since that time you have bought by contract?

A. Yes.

Q. Now, before that did you confine your purchases to the Wickwire Brothers' product, or did you buy some of the product of some other company?

A. We confined our purchases to Wickwire Brothers.

Q. For how long a time?

A. 1909, 1910 and 1911 we bought from Wickwire Brothers.

Q. Exclusively?

A. Exclusively.

Q. Did you get quotations?

A. Yes.

Q. From others.

A. Yes.

Q. From what other concern?

A. In 1909 and 1910 our requirements were so small that I do not think we got any outside figures; but in 1911 we secured prices from the American Steel & Wire Company, and we were solicited by some other companies, the Trenton Iron Company, the Spencer Iron Company and Roeblings.

Q. Were the quotations of these different concerns uniform or variant?

A. Variant.

Q. Have you gotten quotations from other concerns since?

A. Yes.

Q. In 1911 whose was the lowest?

A. Wickwire Brothers.

Q. Did you buy from them that year then?

A. Yes.

Q. Under a yearly contract?

A. Yes, sir.

Q. How was the next year? Did you get quotations from the various concerns then who were offering?

A. Yes, sir.

Q. Were their quotations uniform or variant?

A. They varied.

Q. Which one did you find to be the lowest that year?

A. The American Steel & Wire Company, we purchased from them.

Q. Did you get quotations in 1913?

A. Yes, sir.

Q. From how many different concerns?

A. Well, I should say I think that they all figured on it.

Q. Were their quotations the same or variant?

A. They differed.

Q. All of them?

A. Yes, sir.

Q. Any uniformity among them in any of these years?

A. No, sir.

Q. Which got the contract the last year?

A. Wickwire Brothers; 1913 you were speaking of?

Q. Yes.

A. Wickwire Brothers Company have the present contract.

Q. Was their offer in 1913 lower than the others?

A. Yes, sir.

Q. You took each year the lowest?

A. Yes, sir.

MR. LINDABURY: Cross examine.

MR. DICKINSON: No questions.

MR. LINDABURY: Mr. Waddell.

JACOB D. WADDELL

was called as a witness on behalf of the defendants, and being first duly sworn, testified as follows:

DIRECT EXAMINATION

By MR. LINDABURY:

Q. Mr. Waddell, where do you live?

A. Niles, Ohio.

Q. What is your business?

A. General manager of sales of the Brier Hill Steel Company.

Q. Where is that located?

A. General offices at Youngstown, Ohio.

Q. When was it formed?

A. A year ago the first of last February.

Q. Did it take over the business or businesses of any other concerns?

A. Yes.

Q. Name them?

A. Brier Hill Iron & Coal Company of Youngstown; the Youngstown Steel Company; that was in Youngstown also. Thomas Steel Company of Niles, Empire Iron & Steel Company of Niles.

Q. Was the Empire Steel Company engaged in the manufacture and sale of steel before it was taken over by the Brier Hill Steel Company?

A. Not in the manufacture of steel; no, sir.

Q. What was its business?

A. Manufacturing sheets and kindred products, formed roofings, and so forth.

Q. Were they made out of steel?

A. The greater part of them; we made some iron.

Q. You mean it did not make the semi-finished products?

A. No, sir.

Q. Only the finished products?

A. Only the finished products.

Q. Were you with that company before it was taken over by the Brier Hill Company?

A. Yes, sir.

Q. How long?

A. From March, 1906, until December 1st, 1911.

Q. What was the range of its production and the volume?

A. Manufactured black and galvanized sheets in 14 gauge and lighter up to 36 inches wide and 144 inches long, and all the different forms of metal roofing such as corrugated V crimp, standing seam, roll roofing; they also manufactured metal ceilings, ornamental metal ceilings.

Q. Can you tell us what its tonnage of production was?

A. Our black sheet production was approximately between 30 and 35 thousand tons annually.

By Mr. Dickinson:

Q. Of black sheet?

A. Yes.

By Mr. Lindabury:

Q. Are you omitting any kinds of sheets, galvanized sheets, I think you mentioned?

A. The production of black sheets—it was galvanized afterwards.

Q. So the term black sheets would cover your production in whatever form you sold it, is that right?

A. Yes, sir.

Q. Where did you sell this material?

A. All over the United States.

Q. In what way, I mean by traveling salesmen or mail orders or how?

A. Mostly mail orders. We sold some through commission men. We had no regular traveling salesmen on the road.

Q. Did you have anything to do with the sales?

A. Yes, sir. I had charge of them.

Q. You had charge of them?

A. Yes, sir.

Q. Did you make offers by mail or ordinarily receive offers or requests by mail?

A. We received requests.

Q. Did you make the prices?

A. Usually; yes, sir.

Q. Now, who were your competitors in those sales; I mean the leading ones; were there a great many?

A. Yes, sir.

Q. Will you begin by telling the more prominent ones?

A. The Wheeling Corrugating Company; Youngstown Sheet & Tube; Inland Steel Company; Newport Rolling Mill; American Rolling Mill; Allegheny Steel Company; Follansbee Brothers; American Sheet & Tin Plate Company; Berger Manufacturing Company. These I understand you wish prior to the organization of the Brier Hill Steel Company?

Q. Yes.

A. Thomas Steel Company; De Forest Sheet & Tin Plate Company; Massillon Sheet Steel Company.

By Mr. Dickinson:

Q. Of Massillon, Ohio?

A. Yes, sir.

Canton Sheet Steel Company.

By Mr. Lindabury:

Q. Canton, Ohio?

A. Yes, sir. National Enameling & Stamping Company, St. Louis; Seneca Iron & Steel Company, Buffalo.

Q. And some others?

A. There are some concerns in the east; the Alan Wood Company.

Q. I won't trouble you to tax your recollection any further. There were others besides those you have named, were there?

A. Yes, sir.

Q. Did you fix the prices on your products by agreement with your competitors or any of them?

A. No, sir.

Q. Was there ever, at any time while you were connected with the Empire Company any agreement or understanding as to prices between your company and your competitors?

A. No, sir.

Q. Were or not your productions sold in strict and absolute competition with the competitors you have named, or some of them?

A. Absolutely.

Q. Did you ever attend the Gary Dinners?

A. No, sir.

Q. Who was your president?

A. Jonathan Warner.

Q. Did he attend the Gary Dinners?

A. I think that he attended possibly one or two; not over two, to my knowledge, and he was president from 1906 to 1909.

Q. Did you receive any instructions from Mr. Warner to

conform in any respect or at any time to the prices of any of your competitors?

A. No, sir.

Q. Did you ever receive any instructions from him as to the prices you should charge on particular articles at any time, or did you exercise your own judgment with respect to that?

A. We used to talk those subjects over, but Mr. Warner usually left that entirely to me.

Q. Did he ever mention to you a price at which any of your competitors were selling, or were to sell, or had agreed to sell their products of the same character as those you were selling?

A. No, sir.

Q. Was there any period during the time you represented the Empire Company when prices were either fixed or upheld as the result of any agreement or understanding between you and your competitors?

A. No, sir.

Q. How many sheet mills did the Empire Company have?

A. It had seven stands of mills; seven sheet mills.

Q. Where were they located?

A. At Niles, Ohio.

Q. All of them there?

A. Yes; all in one plant.

Q. Do you know whether the production and consumption of sheets in this country is important, whether that is an important branch of the steel industry?

A. I think it is; yes, sir.

Q. One of the larger ones, is it not?

A. I think so.

CROSS EXAMINATION

By Mr. Dickinson:

Q. When did you begin with the Empire Company?

A. In the spring of 1906.

Q. What position did you hold with them then?

A. Secretary and treasurer.

Q. What were your duties as such?

A. Well, I looked after the sales end primarily.

Q. How long did you continue to hold that office?

A. About three years; and I gave up the secretaryship.

Q. What position did you then take?

A. I still remained treasurer. I gave the secretaryship up to another boy in the office.

Q. To another boy in the office?

A. Yes.

Q. How old was that boy?

A. About 35. We were boys together.

Q. You were always boys to each other, I suppose?

A. Yes.

Q. When you ceased to be secretary, you continued to be treasurer?

A. Yes, sir.

Q. What did you do then?

A. The same as I had been doing before; just looked after the sales, and paid the bills.

Q. What did this boy of 35 do, then, if you did the same thing you had been doing before?

A. He was assistant; he was my assistant.

Q. Although he was secretary, was he your assistant as secretary, or assistant as treasurer?

A. In point of work that was being done, he was my assistant. He used to do a great deal of the correspondence.

Q. After you became treasurer, did you have charge of the duties of secretary?

A. No, sir.

Q. Then you had nothing to do with the duties of secretary after you became treasurer?

A. No, sir.

Q. Then he was your assistant in the discharge of your duties as treasurer?

A. No; in discharging my duties as sales manager, looking after the sales.

Q. Then, after this boy became secretary, you were treasurer and were sales manager also?

A. Yes, sir.

Q. Did he assist in your duties as treasurer or only as sales manager?

A. Sales manager.

MR. LINDABURY: The witness did not say, if you will pardon me, Judge, that he was sales manager. He said he had charge of sales. I am not sure that the titles in that concern amounted to much.

THE WITNESS: No; we had no such title. We were a small concern, and we operated there the same as a family.

By MR. DICKINSON:

Q. It was a small concern, was it?

A. Yes.

Q. That is what I wanted to get at. In 1906 what was your output in tons?

A. Between 30,000 and 35,000 tons annually.

Q. And in 1907?

A. The same.

Q. And in 1908?

A. The same.

Q. And in 1909?

A. The same.

Q. And in 1910?

A. The same.

Q. And in 1911?

A. The same.

Q. And in 1912?

A. The same.

Q. Your business has been at a standstill, then, has it not?

MR. LINDABURY: It has been steady, Judge.

By MR. DICKINSON:

Q. But the business of the country in the meantime has increased very largely, has it not, in sheets?

A. Yes, undoubtedly.

Q. And your percentage of the business has not increased in proportion to the increase of the entire business of the country in that time?

A. No, sir.

Q. You are what is called an independent?

A. Yes.

Q. What do you mean by independent?

A. I have always understood, anyone that was running separate from the Steel Corporation; that is the common expression.

Q. It is a common expression that everybody outside of that is called an independent?

A. That is what I understood.

Q. Did you attend any of the meetings of the committee appointed in pursuance of the Gary dinners, which were presided over by Mr. Campbell?

A. I attended two.

Q. You attended two of those meetings?

A. Yes.

Q. What dates were they?

A. I cannot recall.

Q. What year were they?

A. I should say possibly 1909, though I do not remember distinctly.

Q. Were they both the same year?

A. I think so.

Q. And whom were you representing at those meetings?

A. I was there with our president.

Q. Did your president attend any of the other meetings of that committee, presided over by Mr. Campbell?

A. I don't remember.

Q. If you have any understanding or knowledge in regard to that state what it was, whether he usually attended these meetings, according to your understanding from him?

A. He usually attended meetings of that kind; Mr. Warner was not at the office much.

Q. And he attended those meetings?

A. Yes.

Q. And you attended two?

A. Yes.

Q. And you cannot give the year?

A. No, I cannot say definitely without looking it up.

Q. Where in 1906 did this Empire Company sell its products?

A. All over the United States; any place we could find a customer to buy.

Q. As a matter of fact I want to know now the extent of your territory; was your competition limited at all by freight rates in meeting other makers who were differently situated?

A. There were occasions of that kind.

Q. Now, looking to that, please state within what territory you usually sold?

A. I do not know how I can state it any differently than all over the United States; we sold on the Pacific coast, Texas, Oklahoma, New Mexico and Arizona. I believe we sold goods in every State in the Union.

Q. So that the question of freight rates was no limitation upon you in respect of territory where you met competitors?

A. There were cases where we had to meet conditions of that kind.

Q. You had to meet it by meeting the price?

A. If we wanted the business bad enough.

Q. If you wanted the business bad enough?

A. Yes.

Q. So that your whole territory was practically co-extensive with the United States?

A. Yes.

Q. And there was no limitation upon your trade on account of rates, except that sometimes on that account you had to fix your prices in order to meet competition?

A. Yes.

Q. But you were not restricted to any nearby territory on account of freight rates?

A. No, sir.

WILFRED A. MANCHEE

was called as a witness on behalf of the defendants, and being first duly sworn, testified as follows:

DIRECT EXAMINATION

By Mr. Severance:

Q. Where do you live?

A. Newark, New Jersey.

Q. What is your business?

A. Treasurer and manager of the Newark Spring Mattress Company.

Q. What connection, if any, do you have with the buying of raw materials for your factory?

A. The buying is all done either by me direct or under my direction.

Q. What do you manufacture?

A. Principally metal bedsteads, iron and brass, spring beds and mattresses.

Q. How long have you been in business there?

A. We were incorporated in 1897.

Q. Were you in business previous to that time, or was that the beginning?

A. That was the beginning.

Q. In 1897?

A. Yes.

Q. What products in the way of steel do you purchase for use in the manufacture of the commodities that you sell?

A. We buy angles, bars, rods, sheet, wire and tubing; those are the principal ones of steel.

Q. Taking them up in sections, from what concerns have you been accustomed to buy bars and angles?

A. From the Carnegie Steel Company, the Sheet Steel Company, of Williamsport, and the Buffalo Steel Company.

Q. Where are they located?

A. Tonawanda; and the Cambria Steel Company, and the Eckles-Nye Steel Company, of Syracuse. Those are the principal ones.

Q. What class of commodities do you buy from those concerns?

A. Angles and bars.

Q. I will ask you whether you have been in charge of the buying for your concern since its organization?

A. During the entire time; yes, sir.

MR. DICKINSON: That was in 1897?

THE WITNESS: Yes, sir.

By MR. SEVERANCE:

Q. Now, in the last ten or twelve years since the Steel Corporation was formed—that was formed in 1901—have you bought off and on from these different concerns that you mentioned?

A. Yes, continuously.

Q. How is that?

A. Continuously, off and on, from all of them.

Q. What has been the basis upon which you placed your orders with these different companies? What considerations have influenced you in deciding which one you would buy from?

A. Our general method of ordering is to send for the representatives of these various companies, telling them we have a requirement for so many tons to be taken in such and such a time, and ask them for their price and delivery. The business is then placed with the man who gives us the best proposition. Of course there are times when the product being made by the various companies, varying a little, we give a preference because we want for some special purpose a certain product that is only made by that mill. For instance, the angles made by the Carnegie Steel Company are a lower carbon than those made by the other companies I mentioned. For some of our requirements they are better, and for some of our requirements they are not as good as the higher carbon; so we have to use a certain quantity of each. But for the great bulk of our requirements of angles we can use either one or the other.

Q. You have already stated that the one who made the best proposition would get the business?

A. Yes, sir.

Q. By "the best proposition" what you mean is the price or delivery?

A. It is almost entirely the price.

Q. What has been the fact as to whether the prices quoted

by these different manufacturers have been uniform or varying?

A. There is always a variation. Sometimes one is higher, and sometimes the other is higher.

Q. Take the matter of rods. From whom have you bought rods during the last ten or twelve years?

A. Bought rods from the American Steel & Wire Company, Cambria Steel, Youngstown Sheet & Tube Company, and from Igoe Brothers.

Q. Have you or have you not made your purchases of rods upon a competitive basis?

Mr. Dickinson: I object to that as calling for a conclusion.

The Witness: We have bought them on a competitive basis.

By Mr. Severance:

Q. What has been the fact as to whether these different manufacturers have quoted uniform or varying prices to you when offering their product to you for sale?

A. There has during the last six years—that is as far back as we go in rods—generally been considerable variation in the prices quoted; from five to ten per cent.

Q. Was the method you pursued in making your purchases similar to the one you pursued in the case of bars and angles which you detailed somewhat?

A. Exactly the same.

Q. Have Jones & Laughlin ever sold you any bars?

A. Yes, we have bought bars from Jones & Laughlin, though I think not within the last three or four years.

Q. You did not mention them in the list that you gave. Now, take the matter of tubes. What different makers have you bought tubes from during the period that I have stated?

Mr. Dickinson: What period is that?

Mr. Severance: The last ten or twelve years.

The Witness: The principal people have been the National Tube Company; the Danville Structural Tube Company, of Danville, Pennsylvania; the Keystone Tube, of Mc-

Keesport; and there is a concern in Elyria, Ohio, I think it is the Elyria Tubing Company.

By Mr. Severance:

Q. What considerations have determined you in placing your orders for tubing?

A. We use tubing for different purposes. The tubing made by the Danville Structural Tube Company and the Elyria concern is what is known as a re-rolled tube, and is high carbon. For some purposes we require that sort of tubing. Tubing made by the National Tube and the Keystone are what is known as welded tubing, and they are softer, and there are some places where we have to use that sort of tubing; but for the large part of our requirements we can use either one or the other.

Q. Do you buy any of the product of the Danville Company which is bent hot?

A. Yes. This soft tubing is made by the Danville Company. We have never been able to make bends with our equipment. A few years ago they started to make hot bends and sold the tubing to us in the bent or arch form for bedstead purposes, so that we were able to use that as against the welded tubing in the raw state in making our own bends.

Q. What has been your experience in the matter of prices quoted you by the different manufacturers that you have mentioned, who make tubing; and have the prices been uniform or varying?

A. The prices have been varying.

Q. Have you or have you not placed your orders for the bulk of your requirements—you stated that there were some requirements for which you had to have a particular kind of tubing—for the bulk of your requirements have you or have you not placed them upon a competitive basis?

A. They have been placed on a competitive basis.

Q. You said that you bought wire. From what different manufacturers have you bought wire?

A. From the American Steel & Wire Company; Morgan Spring Company of Worcester.

Mr. Dickinson: Do I understand that to cover a period of ten or twelve years?

The Witness: That covers a period of ten or twelve years.

Mr. Dickinson: From Morgan?

The Witness: Yes, sir; from Roebling, of Trenton; Igoe Brothers, of Newark.

By Mr. Severance:

Q. Igoe Brothers are sometimes spoken of as of Newark and sometimes as in Brooklyn; it is the same concern, isn't it?

A. Their plant is in Newark, and I believe their office is in Brooklyn. It is the same concern. Also from the Cambria Steel Company; the Independent Steel & Wire Company of Kenova, West Virginia. Those are the principal ones.

Q. How long have you been getting wire from the Cambria Company?

A. Our experience with the Cambria only goes back about three years.

Q. The others further?

A. Yes, the others further.

Mr. Dickinson: How about that Independent?

The Witness: The Independent goes back quite a long way, but it is not a very recent experience. They are out of business now. I think they went out of business about two or three years ago.

By Mr. Severance:

Q. That is, as I understand, you dealt with them at times previous to the time you commenced dealing with the Cambria?

A. Yes, sir; I think it would work out that way.

Q. I mean there is no special connection between the two, but just fixing the dates.

A. Yes, sir.

Q. What has been the nature of the competition between the various wire manufacturers from whom you have purchased?

A. Very active competition and great variation as to prices.

Q. What kind of wire do you buy?

A. We buy mattress wire; that is a tinned 22½ gauge steel wire. We buy the plain market or basic wire; we buy high carbon steel wire for making springs. Those are the principal items.

Q. Have you placed your orders for wire in the same way as for these other products that you have mentioned?

A. Exactly, yes.

Q. You spoke of buying sheets. From whom have you bought sheets?

A. We have bought from the American Sheet & Tin Plate Company; from the Berger Manufacturing Company of Philadelphia; we have bought from the Empire Sheet Company.

Q. Where are they located?

A. They are in Canton, I believe.

Q. Canton, Ohio?

A. Yes, sir.

Q. Do you happen to know whether that is the same Empire Company that is now a part of the Brier Hill Company?

A. Yes, sir; I believe it is.

Q. Go ahead. Any other mills?

A. We have bought other sheets. We have bought a number of sheets from jobbers; from Dickerson VanDusen & Company of New York; from James A. Coe & Company of Newark. That covers the principal ones.

Q. What has been the nature of the sheet market during the last ten or twelve years as to being a competitive market or otherwise?

A. We only go back on sheets for about the last four years.

Q. What has been the condition of the market as to being competitive or otherwise during that period?

A. It has been a very competitive market, with frequent changes as to prices, changing almost from month to month.

Q. Mr. Manchee, did you, at my request, look over your books to determine about what amount of tonnage you bought from the subsidiaries you have mentioned and from outsiders?

A. I did look over the books. I did not know it was at your request.

Q. You gave me a little slip or memorandum?

A. Yes, sir.

Q. Are you able to state, by reference to the memorandum which you made from your books approximately the tonnage that you have bought during the various years, the last five years, from the Steel Corporation's subsidiaries and the other manufacturers?

A. Yes, sir.

Q. Have you the memorandum with you that you made?

A. Yes. Here it is.

Q. Are the figures that you have on your memorandum approximately accurate?

A. They are approximately accurate; yes, sir.

Q. And, by refreshing your recollection by the use of that memorandum, are you able to testify approximately as to the amount that you have bought?

A. Yes, sir.

Q. From the Steel Corporation and the outside companies?

A. Yes, sir.

Q. Take the tonnage in bars, rods and angles; I wish you would kindly state the approximate tonnage that you bought from the Steel Corporation's subsidiaries concerning which you have testified, and from outside concerns for the various years from 1909 to 1913.

MR. DICKINSON: This is objected to because it is based on secondary evidence, the books of the company being the best evidence, and it is therefore incompetent.

THE WITNESS: In 1913 our total purchases of bars, rods and angles were 1,600 tons; 100 tons from the U. S. Steel Corporation and subsidiary companies, and 1,500 tons from independents.

In 1912, our total purchases were 1,200 tons, divided into 100 from the U. S. and 1,100 from independents.

In 1911, the total was 900 tons, 100 from the U. S. and 800 from the independents.

In 1910 the total was 850 tons; 175 to the Steel Corporation and 725 to independents.

By Mr. Severance:

Q. 775, is it not?

A. Yes; 775.

Mr. Dickinson: Are you reading from your memorandum?

The Witness: Yes.

Mr. Dickinson: What does that show?

The Witness: 175 and 725.

By Mr. Severance:

Q. That would not add up to 850.

A. That adds up 900.

Q. That should be 900, then, instead of 850, should it not?

A. I cannot say whether the total is right or the separate accounts.

Q. Is that approximately right?

A. Yes, sir; this is aproximately right.

Q. You made this memorandum up yourself, did you not?

A. Yes, sir.

Q. Go ahead.

A. It was afterwards typewritten, and I did not correct it back. There is evidently some clerical error there, because it does not check.

Q. Would you say from your recollection that that is about the proportion?

A. Yes, sir.

Q. Now, 1909?

A. For 1909 the total was 700 tons, divided into 100 and 600.

Q. 100 to whom?

A. 100 to the U. S. and 600 to the independents.

Q. Take the matter of tubing; can you, by refreshing your recollection by this memorandum, give the approximate amount of tubing you bought for these respective years, and the way it was divided between the Steel Corporation, the National Tube Company, and the outside companies?

A. Yes; in 1913, a total of 1,500 tons; 850 to the Corporation and 650 to independents.

In 1912, a total of 1,100 tons: 700 to the Corporation and 400 to the independents.

In 1911, a total of 900 tons; 600 to the Corporation and 300 to independents.

In 1910, a total of 750 tons; 500 to the Corporation and 250 to independents.

In 1909, a total of 600 tons; 250 to the Corporation and 350 to independents.

Q. Are you able to give us approximately the tonnage of wire and the division of the same between the Steel & Wire Company and the outside concerns in those various years?

A. Yes.

Q. Please state what the figures are.

A. In 1913, a total of 425 tons; 225 to the Corporation and 200 to the independents.

In 1912, a total of 375 tons; 175 to the Corporation and 200 to independents.

In 1911, a total of 400 tons; 225 to the Corporation and 175 to independents.

In 1910, a total of 400 tons; 225 to the Corporation and 175 to independents.

In 1909, a total of 350 tons; 200 to the Corporation and 150 to independents.

Q. Take the matter of sheets; are you able to give the same approximate information?

A. Yes.

Q. Will you please give it?

A. In 1913, a total of 1,800 tons; 1,500 to the Corporation and 300 to independents.

In 1912, a total of 600 tons; 500 to the Corporation and 100 to independents.

In 1911, a total of 500 tons; 400 to the Corporation and 100 to independents.

In 1910, a total of 100 tons; 90 to the Corporation and 10 to independents.

In 1909, a total of 50 tons; 40 to the Corporation and 10 to independents.

Q. Right in that connection, how does it happen that your requirements in sheets have increased so largely in the last two or three years?

A. Up to five years ago we used but a very small quantity of sheets. During that time we have developed the proposition of conforming sheets into a certain kind of bedstead tubing for our own purposes, and that end of the business has grown very rapidly. Most of these sheets that we buy are sold by us in the form of bedsteads after having been made into tubing.

Q. You make the tubing yourself?

A. Yes.

Q. That is something you have developed recently?

A. Yes.

Q. Now, these figures that you have given, as to the approximate amount you have bought in these various lines, and the sources of your supply, were taken by you for your memorandum from what sources?

A. From various books of record. In recent years, the last two years, from our order books. We have a system of books there now which shows exactly how our purchases are divided as to classes. In the years before that we took them right from the invoices of the various companies from whom we bought, just went over the bills and took off the tons. When I say 100 tons, that might have been 95 tons or 105 tons. They are approximate, but taken from those sources of information.

Q. From your knowledge of your purchases and your requirements, would you say that the figures that you have stated here on the record are approximately the amounts of your purchases either from the Corporation or from outside companies?

A. They are substantially right; yes.

CROSS EXAMINATION

By Mr. Dickinson:

Q. Mr. Manchee, you have a distinct independent recollection, have you, by which you know that these figures are right, independent of the memorandum?

A. Only distinct in so far as I know that those bills I have referred to in the past years show what we actually bought and paid for. I have not any recollection of how many tons of stuff we bought in 1909.

Q. You have no recollection about it, other than that you made a transcript from your records, and that is the result of your transcript?

A. That is all as to the actual number of tons we bought, yes.

Q. And the division of tons between the different parties, you have no recollection as to that?

A. Not actually, not as to the number of tons; only in a general way.

Q. Only in a general way?

A. I mean to say that without having gone to these books, I could not tell how many tons we bought from the U. S. or how many tons we bought from independents, or how many tons we bought altogether.

Q. Without that memorandum, could you?

A. No, sir.

Q. So that you really have no recollection; you are simply relying upon that memorandum as the result of your examination of your books?

A. Yes.

Mr. Dickinson: We except to that memorandum and all the testimony based upon it, as being secondary evidence and incompetent.

By Mr. Dickinson:

Q. There was one figure given there where there seems to be a discrepancy, between the apportionments and the total. That was for the year 1910, and I understood you to say that you could not say from your recollection which was

wrong, whether the total of 850 was wrong or whether the apportionment of 175 to the Steel Corporation and 725 to the others was wrong; is that a correct statement?

A. I could not say which is right.

Q. You also stated that you prepared the original memorandum and that this is a mere typewritten copy of it?

A. Yes.

Q. Then you did not compare this with the original or you would have discovered that error, would you not?

A. As a matter of fact, I did compare it, and I did not discover the error.

Q. Then you compared it very hurriedly?

A. I did, yes.

Q. Are you able to say, then, after having compared it and after having passed this discrepancy, that this memorandum is, of your own knowledge, a true copy of the memorandum that you made?

A. Why, I would have to go into the method of comparison I made there. I did go over the thing hurriedly, but as to the general figures given there, I should say yes, that——

Q. (Interposing) You compared——

Mr. Severance: One moment; he had not finished. What were you about to say?

The Witness: (Continuing) As to the general figures, I paid more attention to the totals of each item than I did to the additions, as to which went to one concern and which went to another concern.

By Mr. Dickinson:

Q. You did pay particular attention to the totals, and not particular attention to the apportionment, then?

A. In that comparison, yes.

Q. In that comparison?

A. In that comparison, in working it out, I paid particular attention to both.

Q. But I am speaking now of your ability to say that the paper is a true copy of the one that you made. Are you able to say that?

A. Not absolutely, no.

Q. Do you know whether this discrepancy was in your original paper or not?

A. It was not.

Q. As to the year 1910?

A. I know it was not.

Q. Then whoever made this copy made at least one error that you have discovered?

A. Yes.

Q. You are a manufacturer?

A. I am a manufacturer, yes.

Q. You do not sell to the consumers; you sell to the trade?

A. We sell to the furniture and department store trade.

Q. I see that you have not carried your figures back of the year 1909. Did you make any purchases of tubing previous to 1909?

A. Yes, sir.

Q. Can you state from memory the total of tubing purchased by your company for 1908?

A. No, sir.

Q. Then you could not state the apportionment, if you could not give the total?

A. No, sir.

Q. How about 1907?

A. I could not give you the tonnage, without looking it up, that we used.

Q. Or for any of the years except those that you speak of from this memorandum?

A. No, sir.

Q. Now this memorandum covers five years, does it not?

A. Yes, sir.

Q. You stated that during six years there had generally been considerable variation as to the prices quoted on rods, the variation from five to ten per cent. Now, have you any knowledge of the prices of rods for the years prior to those six years?

A. The actual prices quoted?

Q. Yes.

A. No, sir.

Q. Have you any knowledge as to any of the prices made

by the various people from whom you solicited bids or who solicited your custom, and whose prices you entertained when you awarded any of your contracts for any year prior to six years back?

A. Not as to the actual quotation made, but I have a strong recollection as to the variation in prices that were quoted on rods, yes.

Q. Were these rods what were known as standard rods?

A. Known as wire rods.

Q. Was that of standard sizes?

A. Yes; it is a wire rod.

Q. What sizes were they?

A. From a quarter inch to seven-sixteenths inch diameter.

Q. Now, you said that in the last six years there had generally been considerable variation; were there periods during those six years when there was no considerable variation?

A. Yes, sir.

Q. Weren't there periods during that time when the prices on standard rods in the market quoted generally to the trade were constant?

A. Not in our case; not in the quotations made to us.

Q. I am speaking now of the market quotations.

A. I do not know what you mean by market quotations on rods.

Q. Do you ever read the Iron Age?

A. Yes, sir.

Q. Do you ever read any other paper which purports to give market quotations as the base price of standard products in steel and iron?

A. I see the quotation in the daily press for them; yes, sir.

Q. Are these rods that you use the kind of rods for which base prices were given from time to time in the Iron Age, or were they a special rod?

A. Why, they are the same rods that have been mentioned when rods have been mentioned, yes. There is nothing special about them.

Q. You mean in the Iron Age?

A. In the Iron Age.

Q. And did you read the Iron Age prior to six years back and keep posted as to the quotations, upon this kind of rods?

A. I have never read the Iron Age to keep posted on the price of rods, no.

Q. What paper did you read to get information on current prices?

A. I never read any paper to get that information.

Q. Do you know anything about the current published prices on rods?

A. Only as I see it referred to in the paper.

Q. Which paper do you mean?

A. Extracts——

Q. I am speaking now of a time prior to six years back, too.

A. The New York Sun, which is the paper I read. I go over the financial page; there is quite frequently information there, extracts from the Iron Age and other papers. I have read that.

Q. Is it not a fact that before that six years during which you say generally there has been considerable variation that the prices were more constant than they have been during that six years?

A. No.

Q. Can you give the prices at all for any of those periods?

A. No, I could not give the price of rods for 1909. I could not give it to you without looking it up.

Q. Or six years back?

A. Or six years back, no.

Q. Or seven years back?

A. No.

Q. Do you have in your memory now any distinct recollection of any contract that was made by you for rods prior to six years ago, and who were the bidders and what prices they bid? If so just name one six years back.

A. No; without looking it up I could not tell you what prices were quoted six years ago.

Q. You have no recollection about that whatever?

A. I have no recollection as to the actual figures quoted six years ago.

Q. Well, take from 1901 to 1907, from whom did you purchase rods mainly?

A. From 1901 to 1907 principally from Igoe Brothers. I do not think we were using any rods prior to 1904. We started in as manufacturers of spring beds. We do not use any rods in the manufacture of spring beds.

Q. You do not know anything prior to 1904 about the prices of rods?

A. Of rods?

Q. Yes.

A. No.

Q. Now take tubes. From 1901 to 1906, from whom did you principally get your tubes, welded tubes?

A. Welded tubes?

Q. Yes.

A. The National Tube Company.

Q. What percentage of your tubes during that time did you get from the National Tube Company?

A. Welded tubes?

Q. Yes.

A. All of them.

Q. Who else made welded tubes then?

A. I do not know of anyone that was making welded tubes at that time. When you say welded tubes I understand you to mean the welded bedstead tubing. I am only talking about what is known as bedstead tubing now.

Q. I am speaking of the kind you purchased.

A. That is a special tubing as against the regular tubing that is referred to. We handle a bedstead tubing in our business.

Q. That is a special tubing?

A. That is a class of tubing. I don't know whether you would call it special or not.

Q. Was it what is known as standard tubing, on which base prices were quoted?

MR. SEVERANCE: He has already said it is a bedstead tubing.

THE WITNESS: It is a standard bedstead tubing.

By MR. DICKINSON:

Q. A standard bedstead tubing?

A. Yes, sir.

Q. And you say that so far as you know during that period the National Tube Company were the only people who made it?

A. They were the only people that made a standard bedstead tubing, a standard welded bedstead tubing. There were other people making tubing that were used for bedstead purposes, not in exactly the same way as this standard bedstead welded tubing.

Q. It was used for the same purposes?

A. Used for the same purposes, so far as bedsteads were concerned; yes, sir.

Q. That is what you used them for?

A. Yes, sir.

Q. And they were in competition with each other then for that use?

A. Yes, sir.

Q. And you bought, during that period, all of this from the National Tube Company?

A. No, sir.

MR. SEVERANCE: He said he bought all his welded tube from them.

THE WITNESS: I asked you if you were speaking of welded tubing, and I said we bought all our welded tubing from the National Tube Company.

By MR. DICKINSON:

Q. What did you use that for?

A. For the manufacture of bedsteads and spring beds.

Q. Was there any other tubing in competition for that same use made by other people?

A. Yes, there was; a brazed steel tubing.

Q. Used for the same purpose as you used that?

A. Yes.

Q. But all your requirements for that purpose during that period you got from the National Tube Company?

A. No, sir.

MR. SEVERANCE: He did not say so.

MR. DICKINSON: I understood him to say so. Maybe I do not understand the witness. I am trying to understand him.

MR. SEVERANCE: He said he bought all his welded tube from them.

By MR. DICKINSON:

Q. What was that you said you got entirely from the National Tube Company?

A. All the welded bedstead tubing we bought before 1906; not all of the bedstead tubing we bought, but all of the welded tubing.

Q. Was there any other tubing in the market that could be used for that same purpose?

A. Yes, sir.

Q. Made by other people?

A. Yes.

Q. Then I say that, notwithstanding the fact there was other tubing in the market that was competitive for the same use, you bought all that kind of tubing for that use from the National Tube Company. Is that correct or not?

A. I did not say that.

MR. SEVERANCE: He did not say anything of the kind, Judge. Just ask him if he did not buy from those other people that other kind of tubing which was sold in competition with the welded?

MR. DICKINSON: Well, I will start out again. I want to understand you.

By MR. DICKINSON:

Q. What kind of tubing did you say you bought exclusively from the National Tube Company over the period just mentioned, from 1901 to—what date did you give?

A. I think you said prior to 1906.

Q. Well, from 1901 to 1906?

A. Yes.

Q. Just answer what kind of tubing it was you said you bought exclusively from the National Tube Company?

A. The welded bedstead tubing.

Q. Was there any other tubing made in the market which was a competitor for the same use?

A. Yes, sir.

Q. Was it made by people other than the National Tube Company?

A. Yes, sir.

Q. Then my question is: Notwithstanding there was other tubing made in the market a competitor for the same use, you bought all your requirements for that use from the National Tube Company. Is that correct or not?

A. No, sir; I did not say that.

MR. SEVERANCE: Of course he did not say that, Judge, or anything like it.

MR. LINDABURY: Judge, you are one of the clearest-headed men I know, but you are mixed on that.

MR. SEVERANCE: Ask if he bought for that same use from somebody else. That will clear it up in your mind, Judge.

MR. DICKINSON: I will stand on the record there. I think I have got it right.

MR. SEVERANCE: He bought the other kind for the same use. Just ask him that, and that will clear it up in your mind —or I will ask him when it comes my turn.

By MR. DICKINSON:

Q. What size of angles did you buy?

A. We used angles from three-quarters by three-quarters by one-eighth——

Q. Were those angles special sizes or were they sizes known as standard?

A. That is not all the angles we use.

Q. Well, go ahead and tell us the others.

A. I had not finished. You asked what angles we bought. We buy angles from $\frac{3}{4}$ by $\frac{3}{4}$ by $\frac{1}{8}$ inch to $1\frac{1}{2}$ by $1\frac{1}{2}$ by 3 16; all the sizes in between.

Q. Which of those sizes, if any, are known as standard sizes in the market, and which are special, if any?

A. There are no specials.

Q. They are all standards?

A. They are all standard sizes.

Q. Do you know the size that is called the base size of structural steel angles?

A. No. I do not know.

Q. Now, as to these bars. What sizes were they?

A. The bars we used were a very inconsiderable purchase. They were really odds and ends of flat bars, from 3/4 to 3 inches wide by 1/8 to 3 16 inch thick. Some round bars, half inch; square bars 7 16 inch; but those form very small items with us.

Q. What tonnage of bars in 1911 did you buy?

A. I think during that time we would not have used over 50 tons to 75 tons; a couple of cars.

Q. What tonnage in angles during 1911 did you buy?

A. I have not that divided up on this memorandum. It would be, I should say, about 300 tons.

Q. What tonnage in rods did you buy in 1911?

A. A couple of hundred tons.

Q. How much did you say in angles?

A. I am speaking without the records. I should say that we used about 300 tons of angles; somewhere around there.

Q. Then, if you are approximately right, and used 300 tons of angles, and 100—was that in bars or rods? You gave one or the other as 100 tons.

A. 100 in bars.

Q. And 300 in rods?

A. Yes.

Q. That would be seven hundred. That is the best recollection that you can give offhand, is it, as to the total for that year in bars, rods and angles?

A. Well, I very much prefer not to try to recall the figures, because we know from experience what we want to purchase, and we purchase it and pay for it and that is all I charge my mind with; because, when we want to purchase again we look at our records and find out that we used 800 tons, and we

know it is 800 tons, and we buy on that basis. I really should not try to recall just how many tons we used in 1911.

Q. Still, you have given that to the best of your recollection so far as you can recollect, have you not?

A. Yes; but I would not vouch for its accuracy at all.

Q. Because you have no recollection, have you, which would justify you in speaking with any degree of accuracy?

A. I should say not, really.

Q. For any year?

A. No.

Q. Now, you bought wire for these five years that you have specified. Did you buy any wire for 1908?

A. Yes.

Q. I judge from what you said that you have no recollection of the amount?

A. No; the same answer as to that.

Q. What kind of wire did you buy throughout this period; was it generally the same kind, or was it various kinds? I mean to say, was it different kinds in different years, or would it run pretty near the same kind for different years?

A. Usually the same kind, with the addition of a different kind occasionally. For five years about the same wire.

Q. Will you describe this wire?

A. Mattress wire.

Q. Is that the bulk of it?

A. That is an item of it.

Q. That is one item. Go on with the others.

A. I will get into that recollection business again in a minute. That is quite an item in it. I do not know what percentage. The basic wire, about 5 16 gauge, and that class. Market wires, from 12½ to No. 7, and the spring wire from No. 12½ to No. 11.

Q. Are any of these wires what would be called special, as distinguished from standard, or were any of them standard?

A. Well, of course, that application of "standard" to wire does not mean anything to me. There is a standard mattress wire, and there is a standard spring wire, and there is a standard basic wire, and I suppose there is a standard for

other kinds. Wires are divided into classes; they are all standard of their kind, but when you say "standard mattress wire," you mean the standard used for mattresses.

Q. What kind of wire do you mean by basic wire?

A. It is a standard basic product, with a certain kind of carbon, manufactured in a certain way. It is known as basic wire. I never heard the term "standard basic wire."

Q. It is known as basic wire?

A. Known as basic wire.

Q. What gives it that quality from which its name comes as basic wire? Has it a relation to the question of price?

A. No, I think it is in relation to the ore it is made from, and the method of manufacturing it from the ore.

Q. Made of basic steel; is that it?

A. I do not know anything really about the manufacture of steel, but I presume that is it.

Q. What do you use this basic wire for?

A. Well, we use that in a number of ways.

Q. Just describe them.

A. Every spring bed made has a side wire down the side to help the tension of the wire fabric. We use basic wire there. Every metallic crib made has a sliding side.

The wire in which that slides on the side is basic wire, as we use it. It is used on these sliding couches for a stretcher to stretch the wire underneath and overcome the tension of the fabric.

Q. Do you use a large or a small tonnage of that kind of wire?

A. Oh, we use considerable of that.

Q. Just give me, not actually, but as far as you can say, about how much.

A. If you will let me talk of 1913 I will use my recollection, but I can not go back to 1909 and 1907.

Q. Can you go to 1911?

A. No, sir.

Q. In 1913?

A. We have used of that sort of wire this year about 100 tons.

Q. I understood you to say, and if I am incorrect I would

like you to tell me, that there were some things that you used which you got from manufacturers because those particular manufacturers made that particular thing in a way that was better adapted for your purposes than others, and there were other things which you got generally?

A. Yes.

Q. What percentage, either in dollars or tonnage, approximately, of your consumption, was of this special quality that I have designated, that you got from particular manufacturers on account of their meeting your particular views or needs?

A. You mean the ratio of that special stuff to all of our purchases?

Q. Yes.

A. Well, that is a hard question to answer. I should say 15 per cent.

Q. Of the entire amount? You meant in money value or tonnage?

A. I meant in tonnage, but it would carry out in money value too.

Q. Approximately the same?

A. Yes.

Q. Coming to the wire, from whom were your purchases mainly made from 1901 to 1906?

A. To the best of my recollection, from these same people that I have mentioned as from 1909 to 1913.

Q. Well, you did not mention the names there; you mentioned amounts and proportions.

A. I mentioned the names at one time.

Q. Can you not say, if you know?

A. The American Steel & Wire Company; Morgan Spring Company; Independent Wire & Steel Company.

Q. And Roebling?

A. Roebling.

Q. Igoe Brothers?

A. I would not be certain about Igoe Brothers at that time; I do not know when they started. I know the others.

Q. The Cambria went back three years?

A. Yes.

Q. And how far back did the Independent go?

A. I can not give the exact date. Several years.

Q. Did it go back as far as six years ago?

A. Yes.

Q. That would be a different proportion, would it not, from what you have given for those years 1909 to 1913? They were a different set of people; the Cambria was not there, and you have some doubt about Igoe Brothers. Now, what proportion during that time did you buy from the American Steel & Wire Company?

A. Without looking up the records, I could not give any accurate information along those lines. My recollection in a general way is that it would be about the same, because the cutting out of Igoe Brothers and the Cambria still leaves the Independent Steel & Wire Company in, and we used a lot of wire from them.

Q. Where was the Morgan Spring Company? Was that the name of the concern?

A. Yes; the Morgan Spring Company, Worcester.

Q. Did you buy from them, 1901 to 1906?

A. Yes.

Q. All the time from them, or during periods?

A. I think probably we had a continuous account with them.

Q. How about Roebling?

A. That would be only a periodic account, to the best of my recollection. When you go back to 1901 with our business, you get to a very small business; we were not using much stuff of any account then.

Q. When did your business cease to be what you call a very small business? When did it take on a size that would make it a large business?

A. Well, in our trade we think it is generally understood that a business that sells a half million dollars is a fair business. That is the reason I went back five years; that is when we reached about the half million dollar stage.

Q. Back of that you were below that amount?

A. Yes, we were building up to that amount.

Q. Don't you know that from 1904 to 1906 there was a pretty constant price maintained as to wires?

A. I know there was not.

Q. You know there was not?

A. Yes.

Q. Do you know anything of any pools or combinations during that time?

A. No, sir.

Q. You do not know that there were not, do you?

A. No, sir.

Q. You do not know, if there were, who the members of them were?

A. No, sir.

Q. Do not know anything about that?

A. No, sir.

MR. SEVERANCE: I think I will object on the ground that there is no evidence in the case that there were any pools in these wire products that he uses.

MR. DICKINSON: That is all.

RE-DIRECT EXAMINATION

By MR. SEVERANCE:

Q. One thing Judge Dickinson seemed a little confused about was that matter of the tubing you used. You stated that during a certain series of years concerning which he was examining you you had used the National Tube product, the total amount of your use of welded bedstead tubing—now, during the same time did you use any other tubing for a similar purpose which was competitive in the market with this welded tubing?

A. Yes, sir.

Q. What kind of tubing was it?

A. A brazed steel tube, and a butt joint steel tube.

Q. And by whom were these tubes made?

A. During the period mentioned, which was prior, I believe, to 1909, by the Danville Structural Tubing Company.

Q. Did you procure a part of your requirements for that style of tubing from them?

A. Yes, sir.

Q. And was the tubing that they made used by you for the same purpose that you used this product of the National Tube Company?

A. For a great many of the same purposes, yes.

Q. They could be used interchangeably?

A. In our particular business in 90 per cent. of the cases; not in every case.

Q. And they were sold in the market in competition?

A. Yes, sir.

Q. Now, with reference to these figures that you have testified to after refreshing your recollection by this memorandum, as I understood you, you only attempted to give approximate figures?

A. Yes, sir.

Q. Are you satisfied from your knowledge of the business that the figures, as your memory is refreshed by the examination you made of your books, are approximately correct as to the amount that you purchased or the amount that you bought from the Steel Corporation and its competitors?

MR. DICKINSON: I object to this because the witness has not qualified to answer that question, and he has not shown that he has any recollection.

THE WITNESS: Yes, sir.

By MR. SEVERANCE:

Q. You do not attempt to carry the figures in your mind?

A. No, sir.

MR. SEVERANCE: That is all.

RE-CROSS EXAMINATION

By MR. DICKINSON:

Q. What do you mean when you say that you are satisfied that they are correct? Do you mean you have any recollection of them independent of that memorandum?

A. No, sir.

MR. DICKINSON: That is all.

(Whereupon a recess was taken until 2 o'clock P. M.)

AFTER RECESS.

ARTHUR H. DAY

was called as a witness on behalf of the defendants, and being first duly sworn, testified as follows:

DIRECT EXAMINATION

By Mr. Reed:

Q. Where do you live?

A. New Haven, Connecticut.

Q. What is your occupation?

A. I am the secretary of the National Pipe Bending Company.

Q. And where is that company's works located?

A. New Haven.

Q. How long have you been secretary of that company, Mr. Day?

A. Approximately seven years.

Q. That is, since about 1906?

A. Yes, sir.

Q. What is the nature of the business done by that company?

A. We bend pipe and tubing of various materials.

Q. And what do you manufacture, hot-water heaters and things of that sort?

A. Bends, coils, feed-water heaters, and heaters in general where coil is used.

Q. And when was that company established, Mr. Day?

A. About thirty years ago.

Q. Which officer of that company has charge of the purchases that it makes of steel products? Do you have charge of that?

A. Either Mr. Fox, the treasurer, or myself.

Q. Are you familiar with quotations that come to the company?

A. Yes; I always see them.

Q. What kind of steel products do you buy principally, Mr. Day?

A. Wrought pipe and seamless tubing.

Q. Is that wrought pipe what is known as welded tubing?

A. Well, I am not familiar——

Q. Or welded pipe?

A. Welded pipe.

Q. Welded pipe is the word, I was wrong. Do you buy any other kinds of steel products; do you buy any bolts?

A. Bolts, yes.

Q. Any screws?

A. Only under the bolt contract.

Q. Bolts and screws are classed together?

A. Classed together.

Q. About how much welded pipe do you buy in the course of each year?

A. Approximately $50,000 worth.

Q. And when you buy that pipe do you buy it on annual contracts, or do you buy it from time to time in particular lots?

A. We buy it from time to time in accordance with our needs.

Q. How do you get prices on that welded pipe? Do you ask for quotations from manufacturers?

A. We inquire by mail for quotations.

Q. Can you tell me the names of some of the manufacturers from whom you seek quotations?

A. Spang, Chalfant & Company, Youngstown Sheet & Tube Company, A. M. Byers, National Tube Company, Reading Iron Works.

Q. Do you buy from the Republic too?

A. The Republic, yes.

Q. Do the quotations that you receive in answer to these inquiries vary in price, or are they all uniform?

A. I should say that they vary from two to four dollars a ton.

Q. Do these companies have salesmen who come to see you?

A. They do.

Q. Are those salesmen persistent or active in their applications?

A. They are very persistent.

Q. So persistent as to be annoying sometimes?

A. Well, almost.

Q. How long has that been so, Mr. Day?

A. During all my experience with the company.

Q. That is, since you became secretary?

A. Yes, sir.

Q. About 1906?

A. Yes, sir.

Q. Are there other elements in this competition besides price? That is to say, is there any competition on account of the matter of delivery, time of delivery?

A. The promises of delivery that we get have some bearing on the subject.

Q. And that is important to you, of course, isn't it?

A. Very.

Q. On the seamless pipe, Mr. Day, do you seek quotations on seamless pipe, and if so at what intervals?

A. We make an annual contract for a year, a yearly contract.

Q. And what manufacturers do you ask to give you quotations on that?

A. The National Tube Company, Pittsburgh Steel Products.

Q. This is a subsidiary company of the Pittsburgh Steel Company, isn't it?

A. I could not say; and the Ohio Seamless Tube Company.

Q. Do the prices that you receive in answer to these inquiries vary or are they the same?

A. There is a slight variation.

Q. To whom did you give your last annual contract for seamless tube?

MR. DICKINSON: What date would that be?

By MR. REED:

Q. That would be for the present year.

A. This is the contract that will expire January 1st; the contract was dated last January.

Q. With what manufacturer did you place that?

A. With the National Tube Company.

Q. Were they the lowest bidders last December, or when you sought bids?

A. Not quite.

Q. Why then did you give the contract to them?

A. It is quite important in some cases that our men should handle tubing in bending that they are familiar with, and besides that, they have a very large stock locally here.

Q. You had had your contract with the National before that?

A. Previous to that.

Q. Is it important that they should have a warehouse in the vicinity of your works?

A. Very important.

Q. And has the National such a warehouse or its agent?

A. Its agent has.

Q. Are their deliveries reliable or otherwise on that account?

A. The deliveries from the warehouse are very reliable.

Q. Have you had charge of all the purchases of your company since you took hold of it?

A. No. The quotations are always discussed by the officers.

Q. But you have been familiar with them?

A. Always.

Q. And that is true as to purchases of other materials than steel, is it not?

A. Yes.

Q. Has there been competition in the tube business since you first gained acquaintance with these purchases?

A. I should say yes.

Q. What kind of competition has that been, Mr. Day; has it been genuine and active and aggressive?

Mr. Dickinson: This is objected to as calling for a conclusion of the witness, and as an interpretation of the characterization of the competition as set forth in the question.

The Witness: I should say that "aggressive" described it exactly.

By Mr. REED:

Q. You told us that you also bought some bolts and screws. For what period do you make contracts for your requirements in those products?

A. Never less than three months; sometimes for a longer period.

Q. Have you bought any from any subsidiary company of the Steel Corporation?

A. For one or two periods we had a contract with the American Steel & Wire Company.

Q. How long ago?

A. My impression is that was two years ago.

Q. You have not had any contracts with the American Steel & Wire Company for about two years?

A. About two years.

Q. Is there any competition in screws and bolts?

A. Yes; our business is sought for very hard.

Q. Have you made frequent changes of your source of supply in screws and bolts?

A. With at least four different concerns in my experience.

Q. You have bought from four different concerns?

A. Yes.

Q. Have you had quotations from more than four?

A. Well, I am not certain. We have had quotations from at least four.

Q. About how much in money do your purchases of bolts and screws amount to each year?

A. Not over $3,000.

CROSS EXAMINATION

By Mr. DICKINSON:

Q. What time in 1906 did you become secretary?

A. About the middle of the year, sir, I should say.

Q. Then all that you have said applies to a period subsequent to that?

A. Yes, sir.

Q. How long after you became secretary before you took up this question of buying?

A. Our concern is quite a small one, and the officers have always, in my experience, talked over the letting of contracts between themselves.

Q. Have you any distinct recollection as to any contracts or prices in the year 1906?

A. No, sir; I could not recall as far back as that.

Q. Can you give any facts or dates about who made bids and what the bids were at that time?

A. I think we have received in all that period during which I have been with the company bids from the pipe concerns whose names were mentioned.

Q. I am only speaking now, or at least I intended only to speak and will now make it refer to 1906, and am confining it to 1906, after you came in.

A. No, sir; I could not recall any specific dates.

Q. Can you recall from memory anything about prices or contracts or purchases within that six months?

A. I do not know that I understand exactly what you mean, sir.

(The question was repeated by the stenographer.)

THE WITNESS: No, sir.

By MR. DICKINSON:

Q. When is the first definite date that you can recall where you carry in your mind, from recollection, sufficient remembrance and sufficient data in regard to bids and prices to give any statement in regard to comparative bids? What date would you fix?

A. I do not think, sir, that I could come down to a positive date on anything. We are getting bids all the time.

Q. I am not speaking now of the present time, but I am taking it back, for instance, to the year 1907. What recollection do you carry in your mind, definitely, as of that period?

A. I can say with certainty that we bought a great deal of pipe during that period from the Reading Iron Works.

Q. Is that all you can say?

A. Also from the National Tube Company.

Q. Can you say, now, anything as to prices?

A. No, sir; I could not.

Q. Have you any recollection as to anything in regard to the bids as of that year?

A. No, sir.

Q. How about 1908?

A. The same would apply.

Q. How about 1909?

A. The same.

Q. How about 1910?

A. That would be the same, sir.

Q. How about 1911?

A. I could not recall anything in 1911.

Q. These pipes that you bought, were they standard sizes of pipes?

A. Yes.

Q. What sizes were they?

A. They would run all the way from ⅛ inch up to 8 inches.

Q. Take the year 1909. What did your purchases amount to for that year in tonnage?

A. I could not answer in tonnage, sir. It would be in the neighborhood of $40,000 to $50,000. We buy our pipe by the foot.

Q. What did it cost a ton in 1909?

A. I could not say, sir. We buy it by the foot.

JOHN W. FERGUSON

was called as a witness on behalf of the defendants and being first duly sworn, testified as follows:

DIRECT EXAMINATION.

By Mr. Lindabury:

Q. Where do you live?

A. In Paterson, New Jersey.

Q. What is your age?

A. Fifty-five.

Q. What is your business?

A. Engineering and building contractor.

Q. How long have you been in that business?

A. Twenty-one years.

Q. Have you a firm or corporation?

A. Corporation.

Q. What is the name of it?

A. John W. Ferguson Company.

Q. Is that located at Paterson?

A. Yes.

Q. Do you build steel structures?

A. Structures with steel connected with them.

Q. That is, you erect buildings in which steel is used?

A. Yes.

Q. What is the extent of your business in which you use steel?

A. I do not quite understand.

Q. Well, what kind of buildings do you erect?

A. Manufacturing buildings and warehouses and heavy buildings of that character.

Q. What are some of the large ones you have erected?

A. The Newark Warehouse, in Newark; the Johns-Manville plant out near Somerville, at Finderne.

Q. That is a very large one, is it?

A. Yes.

Q. How many acres does that cover? If you can estimate it in that way please state it.

A. About fifteen, I should think.

Q. Any other that you think of?

A. The Babcock & Wilcox plant at Bayonne.

Q. That is a large concern, is it not?

A. Yes.

Q. They are boiler makers?

A. Yes.

Q. Any others?

A. Well, there are a great many others, but those are the principal large ones.

Q. That will do well enough. Can you tell me how many buildings you have erected in the last ten years?

MR. DICKINSON: You mean with steel in them?

MR. LINDABURY: Yes, in the manufacture of which steel was used?

By MR. LINDABURY:

Q. I think you have told me the number of your contracts since 1901 and 1902?

A. Yes; there are about 450 in the last ten years.

Q. How did you get that?

A. That is by the numbered contracts. Each contract is numbered. Of course that may be a building or may be other work. I should say 250 buildings in that time, and possibly 200 where steel has entered into the construction.

Q. Do you fabricate your steel or do you buy it already fabricated?

A. We buy it fabricated.

Q. About what tonnage a year do you use?

A. It varies. I should say the average would be five to ten thousand tons.

Q. Where do you get it?

A. Different fabricating shops.

Q. Do you buy on a competitive basis or some other?

A. On a competitive basis.

Q. What is your practice, do you buy a year's supply or do you buy your supply for each contract as it arises?

A. We buy for each contract as it arises.

Q. Are you visited or not by the representatives of the different fabricators in solicitation of your trade, or do you request or invite bids?

A. Generally we invite the bids.

Q. And from whom?

A. Various concerns, not limited to any.

Q. What concerns supply the fabricated material in your locality?

A. It depends upon the size of the contract. There are numerous small concerns, such as the Passaic Steel Company, Bogert & Carlough, the Hay Foundry & Machine Company and the Goeller Iron Works.

Q. When you want a large tonnage where do you invite bids?

A. From the Hay Foundry and Machine Works, the Phoenix, the American Bridge Company, McClintic-Marshall, the Lackawanna Bridge Company, and occasionally the Fort Pitt Bridge Company.

Q. Do you ever invite bids from Jones & Laughlin, or do not they fabricate?

A. Not for fabricated material.

Q. They do not fabricate?

A. I believe they do, but we have not asked for bids from them on fabricated material.

Q. Do you get quotations in response to those invitations from the concerns you have named?

A. Yes.

Q. Do you ordinarily invite bids on your larger needs from all the larger mills?

A. Yes, sir.

Q. Are the quotations you receive uniform or variant?

A. They are variant.

Q. Has that been so during the last ten years?

A. Uniformly so.

Q. Has there been any time during the last ten years when they were not uniformly variant?

A. No, sir; not in my experience.

Q. What proportion of your requirements have you bought from the American Bridge Company?

A. That is hard to say; it is hard to say that definitely. I should say about half.

Q. And where have you gotten the rest mainly?

A. From these various concerns; no one in particular.

Q. Name some of those from whom you have made your larger purchases.

A. The Hay Foundry & Machine Company; Phoenix; Lackawanna Bridge Company.

Q. Has the giving of your orders or the acceptance of quotations been determined by the price bid?

A. Price and service.

Q. Price and service?

A. Yes, sir.

Q. And has there been any period of time when the quo-

tations of any one of these were uniformly lower than the others, or have they varied up and down, sometimes one higher and sometimes another?

A. They have varied.

Q. Have you ever observed any indications of a combination between the concerns supplying fabricated material as to prices?

MR. DICKINSON: This is objected to as calling for a conclusion of the witness, and an opinion upon untrue and unrevealed state of facts.

THE WITNESS: I have never seen any indication of a combination.

By MR. LINDABURY:

Q. Have the prices of these fabricated materials varied from time to time?

A. Yes, sir.

Q. And the quotations between the fabricators have varied all the time, I understand you?

A. Yes, sir.

Q. As between themselves, I mean?

A. Yes.

Q. How have the conditions in these respects during the last ten years compared with the situation before the Steel Corporation was formed? Did the prices then vary as much or more than during the last ten years?

A. They varied more previous to the past ten years.

Q. Was that variation very great or only moderate in the old days?

A. It varied considerably.

Q. And how have those conditions compared with the conditions that have obtained in the last ten years?

A. In just what respect?

Q. Have prices been steadier than they were during the early period, or not?

A. They have been steadier.

Q. And what has been the effect of this changed condition on the trade in which you are engaged?

A. I think it has been beneficial.

Q. How has it benefited the trade?

A. By having a more stable market, and one which generally has been open, there being less fluctuation in prices than formerly.

Q. What was the disadvantage to the trade of the fluctuations of the earlier period?

A. You did not know just where you stood.

Q. In what respect?

A. Well, you could not count for any period in advance as to what the prices were likely to be.

Q. Well, what difficulty did that occasion?

A. It occasioned hesitancy on the part of many of our clients in undertaking new work.

Q. Has the effect of this steadying of conditions as you have observed it or found it in your trade been to restrain trade or to develop it?

A. I think it has developed it.

Q. Have the conditions which have obtained generally in the steel industry, in so far as you have had immediate contact with it during the last ten years been better or not so well as formerly?

A. I think they have been better.

Q. Was the small erector with limited capital as able to get on in the old days as he is now?

A. I do not quite understand what you mean by "erector."

Q. Well, you said you were an erector, contractor and erector. I am speaking of men in your class of business; not yourself, of course, but of what you have observed, and I was wondering whether or not men in your line of business who were erecting in a small way and whose capital was limited, were able to get along as well under the old conditions of extreme fluctuations as they have been during the last ten years, when you say the market has been much steadier.

A. I do not think that the contractor was affected as the owner was; I think the effect was less with the contractor than the owner.

Q. How was the owner affected?

A. The owner was affected by hesitancy in going ahead with operations at times when prices were stiffening, or ad-

vancing, because on an upward market they could not tell what they could count on a few months ahead.

Q. And how about a downward market?

A. They always thought the price was going still lower, I guess.

Q. Was that condition of extreme fluctuation, then, an impediment in the free flow of business?

A. Yes, sir.

Q. A serious one?

A. In my judgment it was.

MR. LINDABURY: Take the witness.

CROSS EXAMINATION

By MR. DICKINSON:

Q. When did you go into this business?

A. 1892.

Q. When was your company formed?

A. In 1905.

Q. In 1900 what were you doing? Were you in the same kind of work?

A. Yes, sir; I conducted the business as an individual until 1905.

Q. You conducted it then upon your own personal financial responsibility?

A. Yes, sir.

Q. Did you have partners then?

A. No.

Q. In 1905 you formed a corporation?

A. Yes, sir.

Q. You got the capital of others associated with the business?

A. No, sir.

Q. You were the only owner, were you, of the stock?

A. I was.

Q. Then it was your business all the same, except in one instance you carried it on personally and in the other in the name of a corporation?

A. Yes; as a corporation I had men that were in my employ formerly as partners, or interested as stockholders.

Q. Then there were other stockholders in the corporation besides yourself?

A. Since 1905, yes, sir.

Q. That is what I want to get at. Since 1905?

A. Yes.

Q. So there was other capital embarked in the enterprise besides yours?

A. Not that was put in by the stockholders.

Q. They were interested, were they not?

A. They were interested, yes.

Q. Did they buy the stock?

A. No. The stock was given to them.

Q. So that did not put any capital into the business?

A. No, sir.

Q. You gave them part of your stock, then?

A. Yes.

MR. LINDABURY: That is profit sharing.

By MR. DICKINSON:

Q. What was the volume in tonnage of your use in the year 1911 of steel that went into these structures such as you have described?

A. It is very hard for me to answer that, but I should imagine five or six thousand tons.

Q. Take the year before that; about what was it?

A. About the same.

Q. Take the year before that, what was it?

A. I should think it was less than that; about 4,000 tons.

Q. So that would be 1909, when it was about 4,000 tons, and then 5,000 in 1910 and in 1911 about 5,000?

A. Between 5,000 and 6,000.

Q. What was it in 1912?

A. Between four and five thousand tons. I do not keep this record by tonnage.

Q. I understand; but you are answering to the best of your ability?

A. Yes.

Q. So it was about the same in 1912 that it was in 1909?

A. Yes, sir.

Q. Then your business has not increased materially from 1909 to 1912?

A. The gross business has probably increased, but the use of steel has not. The buildings which we erect are many of them what is known as "mill construction," requiring not so much steel as others.

Q. I mean, your business, so far as steel is used, has not increased during that period. In the year 1909 from whom did you buy the bulk of your material?

A. I could not say from memory.

Q. Do you know who were the bidders for that year?

A. I should say from memory the American Bridge Company, the Phoenix and the Hay Foundry.

Q. Have you a distinct recollection that all three of them did bid that year?

A. Yes, sir.

Q. You do remember that?

A. I say that because we always get more than one figure on all the work which we have.

Q. But you cannot state to whom you gave the contracts for that year?

A. No, I cannot.

Q. Take the year 1910. To whom did you give the contracts?

A. Part to the Hay and part to the American Bridge Company and the Phoenix—all of them did work for us.

Q. All three of them in the year 1910?

A. I should say that all three of them have done work for us every year.

Q. I am only asking you now as to 1910. For that year what proportion did you give to the American Bridge Company?

A. Probably more than half.

Q. Take 1911. Do you know who were the bidders that year for the structural steel that was furnished to you?

A. The same people.

Q. Have you a distinct recollection that it was those same people and not some others?

A. I think those same people, because we practically confine ourselves to three or four parties for work of any magnitude.

Q. So, for your larger structural work you have, throughout the time since the formation of the Corporation, confined yourself practically to three or four parties?

A. Yes.

Q. And those were the American Bridge Company, the Hay Foundry Company, the Phoenix—and what was the other one, the fourth?

A. The Bethlehem.

Q. Take the year 1909; how much did you award to the Bethlehem?

A. I do not think we purchased any from the Bethlehem.

Q. Take the year 1910.

A. I do not think we purchased any in that year.

Q. Well, 1911?

A. Very little; some, but not much.

Q. Do you carry in your mind the bids for that year for those four companies?

A. No; I cannot give you that.

Q. Do you know, as a matter of fact, that those four companies bid for that year for your steel structural material?

A. To the best of my knowledge, yes.

Q. What do you base that on? Any memory of the fact as such?

A. No; not as an individual piece of work, but as our policy in securing figures for steel work.

Q. You say it is based upon policy; but can you base it upon any distinct recollection for that year of any bids that were made for any contracts for that year by any of those parties you have named; and how the bids varied?

A. No, sir; I cannot answer that.

Q. Can you do that for the year 1910?

A. I would not attempt to answer that from memory.

Q. Or for 1911?

A. No; I would not answer that from memory.

Q. Or for 1912? Would you undertake to answer for that?

A. That we obtained bids from these three parties?

Q. No. The question is: Can you state, or have you any recollection of the bids and the differences in the bids for 1912?

A. No; I have not. I have no recollection of the differences.

Q. You spoke of bids being variant?

A. Yes.

Q. Do you mean that, from time to time, the bids varied over periods of time?

A. The bids we received were generally in a lump sum for each particular contract.

Q. In regard to those contracts: Did any of them call for special work?

A. It was all special work, adapted for the individual buildings.

Q. And the contracts were lump contracts for that particular work?

A. Yes, sir; they were lump contracts.

Q. Did you ever buy any standard structural material from any manufacturers independent of these particular contracts? If so, what year and from whom?

A. We bought material from smaller concerns for smaller work. We did not buy from the mills as unfabricated material; all we bought was fabricated material.

Q. Were there or not periods running at various times of months in length, from 1901 down to 1911, where the base price upon structural material would not change, and then would there not be times when there were what was called an open market, where there would be decided fluctuations or changes in those prices?

A. I was not a purchaser of material that would bring out those prices.

Q. What material were you purchasing?

A. I was purchasing fabricated material.

Q. You are not familiar, then, with unfabricated material and prices?

A. Not with the prices of unfabricated material.

Q. And what you have stated only applies to fabricated

material, and to the particular contracts on which you solicited bids?

A. Yes.

Q. Now, you have spoken of the conditions prior to 1901. You say that the fluctuations in prices then were frequent and quite extreme at times?

A. Yes.

Q. The competition was very sharp, then, was it not, in prices?

A. I would not say any more so than now.

Q. What brought about these fluctuations, then, that you spoke of? If it was not that competition, what did it?

A. Supply and demand.

Q. And it was only at periods where there was an increased demand where there was a higher price?

A. Not always, but generally.

Q. And were there not long periods where there were no fluctuations, where it was understood that the prices were sustained by pools?

A. Previous to 1901?

Q. Yes, 1901.

A. That I can not say from personal knowledge, but that was the impression.

Q. You say after 1901, after the formation of the United States Steel Corporation, a change became manifest in the steadiness of the market, do you?

A. Yes.

Q. And the market was much steadier than it was before?

A. Yes.

Q. And there was not much fluctuation in prices after that time?

A. There were fluctuations, but not as erratic or as great.

Q. There was a very great influence after that time exerted in some way to steady the market and bring about a steady and more nearly constant price?

A. I think so.

Q. Do you attribute that to the influence of the United States Steel Corporation?

A. I do, to a large extent.

EUGENE McK. FROMENT

was called as a witness on behalf of the defendants, and being first duly sworn, testified as follows:

DIRECT EXAMINATION

By Mr. Lindabury:

Q. Where do you live?

A. New York City.

Q. What is your age?

A. Thirty-six.

Q. What is your business?

A. Iron and steel merchant.

Q. Where in New York are you located?

A. At the corner of Bank and Washington Streets.

Q. In what kind of steel do you deal?

A. Practically all kinds of rolled and wrought iron and steel.

Q. You are a jobber in these lines, are you?

A. Yes.

Q. That is, you buy and sell to the retailer or consumer?

A. Yes.

Q. Is your business large?

A. That depends upon what you consider large.

Q. How much is it?

A. We handle between 15,000 and 18,000 tons a year.

Q. Of what?

A. All kinds of steel material, and a great deal if iron material as well.

Q. Do you sell structural shapes?

A. We do.

Q. Have you a considerable trade in that?

A. Considerable; we have a large stock of them on hand.

Q. You carry a stock, do you?

A. Yes.

Q. To whom do you sell that?

A. To structural shops, bridge shops, boiler shops and sometimes contractors; any one who happens to use that class of material.

Q. How often do you make your purchases?

A. Almost daily.

Q. Who attends to the purchasing for your concern?

A. At the present time I am doing practically all of it.

Q. How long have you been engaged in purchasing for your concern?

A. For the last three or four years, practically all of it; prior to that time, a considerable part of it.

Q. How long have you been acquainted with the price conditions of the materials that you handle?

A. About 19 years.

Q. And what, prior to four years ago, and during the period beginning ten years ago, did you have to do with the purchases?

A. At that time my father was active in the business and he did considerable of it, but in his absence I had to do the most of it.

Q. You did enough to keep familiar with the markets?

A. I have been familiar with it right along.

Q. How do you buy, in response to solicitations from representatives of the manufacturers, or on quotations obtained at your invitation?

A. In both ways.

Q. In which way do you buy the larger part?

A. I should say by manufacturers soliciting our business in our office.

Q. Do you purchase on a competitive basis?

A. Absolutely.

Q. Have you done that at all times during the last ten years?

A. Practically at all times.

Q. What other kinds of rolled materials, other than structural shapes, do you handle?

Mr. Dickinson: You are speaking now of iron as well as steel?

Mr. Lindabury: I will confine it to steel.

The Witness: Bars, plates and sheets and shapes; that covers almost everything outside of bars and plates.

By Mr. Lindabury:

Q. Bars and plates?

A. Bars, plates and sheets.

Q. How about rods?

A. We consider in our business a rod a bar, a small bar.

Q. That takes in about the whole product of a rolling mill, does it not?

A. Practically everything from a rolling mill.

Q. And is your trade considerable in those products that you have just named, other than structural shapes?

A. Considerable.

Q. You say you buy pretty much every day?

A. We have occasion to buy practically every day.

Q. Are the quotations made to you by representatives of different manufacturers uniform or variant?

A. They vary according to the market.

Q. But as between the manufacturers, do they or not quote the same price at any given time, or variant prices?

A. I should say that at times some manufacturers will quote prices practically the same; at other times, widely different.

Q. How is it generally, I mean?

A. I should say generally you could obtain different prices from different manufacturers.

Q. Do you keep familiar with the prices quoted in the newspapers?

A. I read them occasionally.

Q. The Iron Age quotes prices, does it not?

A. I believe it does; I have read them in the Iron Age and I know that they do.

Q. Are there other papers which contain quotations?

A. I think so; I am not familiar with them.

Q. You know the paper, the Iron Age?

A. We subscribe to it, and it comes into the office. I see it occasionally.

Q. Do you know how the quotations of the manufacturers compare with the quotations in the Iron Age?

A. I do not consider the Iron Age quotations particularly reliable.

Q. That was not just what I asked you, but whether or not the prices quoted to you by the different manufacturers agreed with the prices that are stated in the Iron Age, ordinarily.

A. Generally I can buy my material cheaper than the prices quoted by the Iron Age, as a general thing.

Q. How long has that been the case?

A. That has been more or less always the case, as long as I can remember.

Q. Is that what you meant when you said that you did not consider the Iron Age prices reliable?

A. Yes; not in my business.

Q. From what concerns do you buy your rolled materials?

A. Carnegie Steel Company; Republic Iron & Steel Company; Cambria; Phoenix Iron Company; Eastern Steel Company; American Sheet & Tin Plate Company; La Belle Iron Works—I can name any quantity of them.

Q. Go on.

A. Stark Rolling Mill Company; Youngstown Iron & Steel Company; J. Wood & Brothers; Alan Wood—I can give you as many as you want; we have about 150.

Q. That is, you buy from 150 different manufacturers?

A. I should say so.

Q. And have these purchases been distributed on a competitive basis; that is, have you bought in every case because you got better terms?

A. We usually buy where we get the cheapest.

Q. And that has determined the distribution of your business?

A. As a rule it does; occasionally we consider delivery, and must.

Q. How much have you bought from the American Sheet & Tin Plate Company; that is, what percentage of your purchases?

A. Within what period, the last year?

Q. Well, if you choose, or during the ten years?

A. Last year I should say about 40 per cent.

Q. How much would it average during the ten years?

A. Probably 60 per cent; their competitors to-day are making better stuff than they used to do.

Q. Have you purchased from any other of the Steel Corporation subsidiaries?

A. Very occasionally from the American Steel & Wire and slightly from the American Bridge Company, but to no extent.

Q. Has there been any time, or any period of time, I ought rather to say, when the prices of any two of these manufacturers of any particular article have been the same?

A. Yes; there are times when they are the same.

Q. Has there been any time when that continued over any considerable period, when any two of them quoted the same prices on the same articles?

A. It continued at times for several months.

Q. Has there been any time when any considerable number of them quoted the same price on any one article?

A. Well, some of the concerns quote the same at times when business conditions are such that it would be, you might say, like quoting a market price, and again when business conditions are not very good they quote a different price, depending on the demand and supply.

Q. Depending to any extent upon the condition of the mills of the particular manufacturers?

A. Depending upon the condition of facilities which they have for getting out material.

Q. Have you ever observed any indication of a combination between any of these manufacturers who were supplying you on the prices of the articles you were buying?

MR. DICKINSON: That is objected to as incompetent. It calls for a conclusion of the witness, and his opinion based upon an unrevealed state of facts.

THE WITNESS: I know of nothing which would lead me to believe that.

MR. LINDABURY: Take the witness.

CROSS EXAMINATION

By MR. DICKINSON:

Q. You buy structural shapes?

A. Yes, sir.

Q. Standard structural shapes?

A. Yes, sir.

Q. How long have you been buying standard structural shapes?

A. Ever since I have been in business.

Q. That runs——

A. Nineteen years.

Q. What sizes?

A. Structural shapes comprise beams, channels, angles and T's in my idea. You might say all sizes that are made.

Q. Take beams, then; did you buy all sizes that are made?

A. All sizes from three to twenty-four inches.

Q. You stated that there were times running as much as three months where a number of manufacturers of certain things would quote the same price, did you not?

A. I said several months.

Q. Several months at a time?

A. Yes, sir.

Q. I will ask you if that did not occur in standard structural shapes from 1901 to 1905 very frequently?

MR. LINDABURY: One moment, before you answer these questions. Judge, I do not believe you meant to change the witness' former testimony. He said when two would happen to quote the same prices. Now, you have got it several.

By MR. DICKINSON:

Q. Do you mean to say that there were only two bidders at any time that ever quoted the same price?

A. No, sir.

Q. Well, as a matter of fact, did not it often occur that more than two quoted the same price?

A. Yes, sir.

Q. And that would extend over periods of several months?

A. Yes, sir.

Q. Didn't that occur with respect to structural shapes with great frequency from 1901 to 1905?

A. I cannot say that I have that in my mind. I could not tell that offhand.

Q. You do know that during the period during which you have been buying that has occurred?

A. Yes, sir.

Q. And that it has extended for continuous periods of a number of months?

A. Yes, sir.

Q. Do you buy nails?

A. No sir.

Q. Well, how about sheets?

A. We buy sheets.

Q. Did the same thing apply to that in the quotations?

A. Sheets as a rule fluctuate in price considerably more than other products in my experience.

Q. But there were times——

A. I have known two sheet concerns to quote the same price.

Q. Have you known of more than that to quote the same prices?

A. Yes, sir.

Q. How about plates?

A. I might say the same about everything; sometimes they quote the same, sometimes they quote different prices.

Q. Have there not been periods known in the steel market as when the market was open, and periods when the market was not open?

A. No, sir; not to my knowledge. I do not know what you mean by open market.

Q. Did you observe any change at all about or after February 18th, 1909, which was characterized by a much sharper competition and a cutting of prices as between manufacturers as contrasted with what had obtained for a long time before that?

A. I have not that date in mind. I know that we had a large drop in prices. I think it was in 1909.

Q. Wasn't that known as an open market for quite a period?

A. I do not know what you call an open market.

Q. If there is such a term as that used you are not familiar with it?

A. No, sir. I know what a market price is.

Q. But you do not know what an open market is?

A. No, sir.

Q. What took place during that period to which you refer—we will not give it any name, but let us see what occurred.

A. In respect to what?

Q. In respect of prices. Did prices fall? Was there a cutting of prices?

A. To which time do you refer?

Q. 1909; about February—the one you referred to.

A. I think there was a sharp break in prices.

Q. How long did that continue?

A. Several months; and then prices got stronger, as business got better.

Q. This sharp break; was that a sharp contrast with what had obtained for quite a while prior to that?

A. I have known very much larger breaks in prices in years gone by.

Q. Tell me some of them.

A. I have not got the dates or figures of that kind in my mind.

Q. Then leave that aside, and let us contrast that break in that period to which you have just referred with what had obtained before that. What were the differences between the two periods? What were the market differences?

A. The break I have in mind was about $5 a ton. I have known them to be that or more a great many times.

Q. Was not that followed by another break of several dollars a ton?

A. I think prices went down that time steadily for three or four months.

Q. Then, after that period, did they not go back and remain approximately constant for a long period?

A. If my recollection is right, prices got higher for two or three months to come.

Q. And continued that way?

A. And continued getting higher until they reached a point where they remained steady for a while.

Q. Was there not a break in 1911?

A. Let me see. In 1911? I have not that in my mind; there may have been.

Q. Mr. Froment, you spoke of getting the prices, and in that connection I understood you to say something about market prices. What did you mean by "market price," if you used that expression?

A. A price that is paid for, you might say, the largest percentage of the article that is turned out at the time. The price that rules on an article from day to day.

Q. Did not market prices upon a great many of those articles rule over months at a time?

A. They have at certain times; when business was good the market price stayed steadier.

Q. And you say that you could get a price, by dealing with the parties, different from the market price?

A. I have often beaten the market price.

Q. But you do not mean to say that all of the manufacturers offered you prices during that time below the market price, do you?

A. Not all of them.

Q. How do you get your idea of market price?

A. What I know about the fact, what I know the material sells for.

Q. What do you mean, what it sells for generally?

A. What it sells for generally, to the people who buy it.

Q. That is the general ruling price, is it?

A. The general ruling price.

Q. How do you get that information?

A. Both from quotations I receive and from things I hear from my customers, as to what they pay for materials.

Q. Is that a pretty constant price over long periods?

A. It does not usually stay very long at a time. It all depends upon business conditions.

Q. But it is a general price, is it, that applies to all manufacturers within the periods over which you spoke of its prevailing?

A. Not to all manufacturers.

Q. Generally to the larger manufacturers?

A. I should say there was a market price for any article at any time.

Q. A market price for any article at any time? You mean it was the price at which the people generally who dealt in that article during those periods paid the makers of that article over those periods?

A. Yes.

Q. And you got some variation, or you did get some variation from these prices?

A. Lots of variations from those prices.

Q. From particular solicitations, and coming out of particular transactions between you and the manufacturer?

A. Yes.

Q. When you got that variation, you understood that it was a variation from the market price, did you not?

A. No, I understood it was another price, a price a mill would make to me for material.

Q. But that it was a variation from what?

A. I did not say it was a variation; I said it was a price they would make me for material. I mean it was a variation from what others were paying.

Q. What others were paying generally in the market?

A. Yes.

Q. You spoke of sheets fluctuating more than plates. How about bars; did they fluctuate any more than structural material?

A. There were fewer makers of bars, as far as I know, than there were of sheets.

Q. I am asking, now, about fluctuation.

A. There cannot be so much fluctuation.

Q. As a matter of fact, then, was there or was there not? Just leave out the reason, and state the fact.

A. Was there more fluctuation in bars than there was in sheets; is that the idea?

Q. No; in structural material.

A. Was there more—I do not think I catch the question.

Q. I understood you to say that sheets fluctuated more than structural material.

A. Yes, sir.

Q. I am asking now as to bars, as compared with structural material.

A. I should say that structural material fluctuates more than bars.

Q. You said something about the number of makers—that there were more makers of sheets?

A. Yes; there are to-day.

Q. And there was a greater fluctuation of them, than there was of bars and plates?

A. Yes, sir.

MR. DICKINSON: That is all.

ALFRED D. CLINCH

was called as a witness on behalf of the defendants, and being first duly sworn, testified as follows:

DIRECT EXAMINATION

By MR. LINDABURY:

Q. Mr. Clinch, where do you live?

A. Mount Vernon, New York.

Q. Where is your business?

A. 84 and 86 White Street, New York.

Q. And your company?

A. Underhill, Clinch & Company.

Q. What is their line; what do they do?

A. General hardware.

Q. What, of wire products, do they handle?

A. Miscellaneous wire nails, standard wire nails, poultry netting, poultry netting staples.

Q. Annealed wire?

A. Annealed wire.

Q. Barbed wire?

A. Barbed wire and galvanized wire.

Q. Wire fencing?

A. No wire fencing.

Q. Do you handle any other steel products, or is that about the line?

A. That is about the line that we carry.

Q. How long has your concern been handling these wire products?

A. I should say 30 years.

Q. Where have you bought your supplies during the last ten years?

A. Shall I name the manufacturers I deal with? I buy from the various manufacturers.

Q. I think you might name some of the larger ones, at any rate, or some of those from whom you make your principal purchases.

A. The American Steel & Wire Company; Wickwire Brothers; Clinton Wire Cloth Company; Wright Wire Company; Igoe Brothers. I think that would include the principal ones.

Q. That will do. Do you buy your supplies on a competitive basis or not?

A. On a competitive basis.

Q. And has competition been active in the sale of these products during the ten years past?

A. Too much so.

Q. Why do you say that?

A. Because a steady market is for the best interest of the jobber, because an unsteady market causes losses of contemplated profits very often.

Q. How has the great activity in this market manifested itself to you? You say it has been very active.

A. Unfortunately in the hardware line they keep on the heels of one another pretty extensively, the manufacturers do, and I have never known them to be able to make a price that was not pretty well known in the trade in a very short time by the other manufacturers. There seems to be no secrecy in that line in the hardware trade.

Q. Is your trade in nails large as compared with other hardware products?

A. No, we are small purchasers of nails.

Q. Are nails sold close or not?

A. That is the reason why we are small dealers. We sell as few as possible.

Q. Why.

A. We try to get our customers to buy nails from the other parties, so as to buy the hardware from us.

Q. What is the reason?

A. Because a carload of nails costs so much, and when a retailer buys that he is tied up with his capital, and we try to get him to buy the nails somewhere else and buy his hardware from us, so as to make a profit.

Q. They are sold so close that there is no profit in them?

A. There is no profit in them. It is like sugar in the grocery trade.

Q. You mean that the hardware man handles them because it is compulsory?

A. Yes; it is a compulsory stock.

Q. That is the principle upon which the grocer sells sugar?

A. On miscellaneous wire nails we sell more extensively, because there is more profit in those.

Q. Do you buy on solicitation of manufacturers, or on bids in response to inquiries, or both?

A. Our trade is solicited by the various manufacturers.

Q. Do you ordinarily buy in response to those solicitations, or do you buy to any considerable extent as the result of quotations on inquiries that you have made by letter or otherwise?

A. Both.

Q. Both ways?

A. Both ways.

Q. Are those products quoted to you at the same price or at various prices by the manufacturers?

A. Variant prices.

Q. Has that been so for the last ten years?

A. Yes.

Q. Is there any one of those products that you deal in in respect of which the manufacturers have quoted a uniform price during the last ten years? Do you get my question?

A. Yes; I was trying to think. I cannot think of any.

Q. Have the prices of various articles varied from time to time?

A. Yes.

Q. As well as the quotations between the manufacturers, they varied all the time?

A. Yes.

Q. Have you ever observed any indication of a combination between manufacturers of those powders as to prices, during the last two years?

Mr. Dickinson: One moment; this is objected to as incompetent and as calling for a conclusion of the witness, and his opinion upon an unrevealed state of facts.

The Witness: I do not know of any such.

By Mr. Landreth:

Q. Have they uniformly tried to better each other's prices and get the trade?

A. The competition has been very severe; that is the fact.

Mr. Dickinson: Was that question answered, or do you withdraw it?

Mr. Landreth: I will take the answer; it is not quite an answer to the question, but I will take it. It is a better answer than the question.

Mr. Dickinson: I just want to understand about the record. I do not know whether the witness answered the question or not; you went on and asked another question.

Mr. Landreth: You mean the one objected to? Have him read it.

Mr. Dickinson: I put in an objection, and before he answered you went on and asked another question.

Mr. Landreth: That is a withdrawal then, if there was no answer to it.

Mr. Dickinson: I stopped him; I did not understand there was an answer afterwards.

(The last two questions and answers were repeated by the stenographer.)

By Mr. Landreth:

Q. Have you seen anything to indicate to you that there was a combination between them as to prices? Did you know that, or did you see anything to indicate that?

Mr. INGERSOLL: Same objection.

THE WITNESS: Not that I could say, that I know of such.

By Mr. LEONARD:

Q. They quoted to you different prices on the same articles as they called from time to time and offered them, you said?

A. Yes.

Q. They were treading each other's heels very sharply?

A. Yes.

Q. Looking for business?

A. Yes.

Q. And that has characterized the trade for ten years?

A. Yes.

Mr. LEONARD: Take the witness.

CROSS EXAMINATION

By Mr. INGERSOLL:

Q. You said you did not know anything about combinations, or that you could not say that you knew anything about combinations.

A. I know personally of no combinations.

Q. That is to say, you were not in any combination?

A. I was not in any combination.

Q. And you were not present when any combination was made?

A. No, sir.

Q. Don't you know, as a matter of fact, that within the last twelve years there were long periods of time, such as months following each other consecutively, where upon certain steel products there was a constant market price, and that there were other times when there would be a break in the price and the market would be characterized as an open market, and that this would continue, and then a more stable price would be assumed and would continue over periods of months at a time or longer?

Mr. LEONARD: I object to that question because it calls for a period of twelve years, whereas the direct examination was confined to a period of ten years.

Mr. Dickinson: You mean mine calls for twelve years.

Mr. Lindabury: Yes.

Mr. Dickinson: Change it to ten years.

The Witness: I know of no goods that we handled in which the prices did not vary within what I would call a reasonable time.

By Mr. Dickinson:

Q. Don't you know that there were articles, steel products, that were handled by you, where the market price would not vary sometimes for months at a time?

A. I cannot think of an article of that kind.

Q. Mr. Clinch, is it not a matter of notorious and common knowledge in the hardware business that at times from 1901 down to 1911 there were periods of time, some several months consecutively, where there was a constant market price, and then there were other periods of time where there would be a break in the price and the market would be called an open market?

Mr. Lindabury: Do not answer that question yet. I object to the question because it is of no account what is notorious in this case. This is not a cross examination upon the testimony of the witness, which dealt with his own particular trade.

The Witness: I know of no time in which there was a price on nails, which would be the principal article, in which there were not always rumors of cut prices by competitive manufacturers.

By Mr. Dickinson:

Q. Those prices would be cuts under the market price?

A. Under what was supposed to be the market price.

Q. There was a price which was understood to be the market price, and these prices would be cuts under that price?

A. There has always been that condition, so far as my knowledge goes. The market price is supposed to be the general price. That is what we term the market price, the general price.

Q. Have not those prices continued for periods of time

amounting to as much as several months consecutively from time to time?

A. It has been always so in the hardware trade.

Q. Always so in the hardware trade?

A. Yes.

Q. And have there not been periods in the hardware trade where there would be a break in the price followed by what would be called an open market?

A. In the hardware trade prices are most apt to be made for seasons, either fall or spring; the manufacturers having in mind that the jobbers are compelled to carry stock, they generally made their prices in the spring, and until the season is over, and they are very apt to be maintained. Otherwise the jobber would have a poorer show than he has at present.

(The pending question was repeated by the stenographer.)

MR. DICKINSON: I will change that question and make it this.

MR. LINDABURY: You do not mean you will change that question; you will ask another.

MR. DICKINSON: I will ask another.

MR. LINDABURY: We would like to have the question unchanged and the answer stand.

MR. DICKINSON: I don't mean to change the record.

By MR. DICKINSON:

Q. I will put the question in a different form. I used the term hardware there—I will put the question to you this way. Have there not been long periods of time from 1901 down to 1911, where for as much as several consecutive months such steel products as you have bought from manufacturers were at a constant market price throughout such periods, and have there not been times when in respect of such steel products there have been breaks in the market which were known as open markets?

A. I know of no period in which there have not been at least rumors of cut prices below those at which I was buying goods, if that covers your question?

Q. No, it does not. I do not think it does at all. You are

speaking of rumors of cut prices, but I am asking you about the fact of there being maintained generally a practically uniform price as to certain steel products which you have dealt in extending over periods of several consecutive months.

A. I could only answer that in relation to those that I handle myself of one manufacturer whose goods I handle.

Q. One manufacturer——

A. Some lines of goods we only handle the goods of one manufacturer.

Q. But you handle some lines of goods that you just testified you bought from a number of manufacturers?

A. I could only answer this question in regard to poultry netting, for instance; we only handle one manufacturer's line of that goods, and I could only speak authoritatively in regard to that line.

Q. How long have you handled that one?

A. How long have we handled that?

Q. Yes.

A. Probably for twenty years.

Q. And you say you have bought from no one but that manufacturer that article?

A. That is all.

Q. Then there has been no competition in your purchase of that article?

A. Not in the purchase of that, but in the selling of it.

Q. In your selling it?

A. In the selling.

Q. To other people?

A. Yes.

Q. When you were speaking about prices varying from time to time were you speaking of the prices of the hardware merchant or the prices of the manufacturers to the hardware merchants?

A. I was answering some of the questions in regard to goods I buy from competitive manufacturers, but in this one case I am speaking now of only buying from the Clinton Wire Cloth Company.

Q. Then as to the wire cloth you do not say that there is

any competition between manufacturers and that you bought that upon competitive bids.

A. I did not buy that on competitive bids on account of my relations with the Clinton Wire Cloth Company.

Q. What did you buy on competitive bids, nails?

A. Standard nails.

Q. Were not the prices the same on standard nails from all manufacturers?

A. Not to us.

Q. Have not the prices of the independents and of the Steel Corporation been practically the same on miscellaneous nails and keg nails since the United States Steel Corporation was formed?

A. Miscellaneous nails which we sold the most of I have been able to buy cheaper from the American Steel & Wire Company than I have from competitive manufacturers.

By Mr. Reed:

Q. What are keg nails?

A. Standard nails.

Q. That is another name for standard nails?

A. In the hardware trade they call it standard nails.

By Mr. Dickinson:

Q. Haven't the prices of the independents and of the Steel Corporation been practically the same for keg nails since the United States Steel Corporation was formed?

A. We are not large enough buyers of those to really answer that question.

Q. Whom have you bought from?

A. For instance at the present time we are buying nails mainly from the agents of the Pittsburgh Steel Company.

Q. How long have you been buying from them?

A. It varies; ever since they have been in business we have had some of their products, probably.

Q. From whom have you bought the bulk of your keg nails in the last ten years?

A. The bulk of it from the American Steel & Wire Company.

Q. And you have been buying keg nails for the last ten

years, and still you have not sufficient information to answer the question that I asked you as to the prices of the Steel Corporation and of the independents on keg nails being practically the same since the Steel Corporation was formed?

A. No, sir; I could not answer it authoritatively.

Q. You could not answer it either one way or the other?

A. No, sir, not authoritatively.

Q. What is your best recollection on that subject?

A. Our annual business in that line has been so small that most of our nails we have purchased from the American Steel & Wire Company, for the reason that in buying a carload we could combine other wires and other products which would help make up the car so we would put in nails, whereas if we bought from some of the other makers we would have to buy nails entirely.

Q. So, then, you did not buy them on competitive bids?

A. No, although I know the market conditions.

Q. I am asking you now whether the nails that you bought from the American Steel & Wire Company you bought on competitive bids?

A. No, other conditions influenced me.

Q. I am not asking you what influenced you. I am asking you whether you bought them on competitive bids or not.

Mr. Reed: He has answered that he did not.

Mr. Dickinson: I don't think he did.

By Mr. Dickinson:

Q. Is that all the answer you want to make?

A. That is all I think I can make.

Q. And you cannot say whether you bought them on competitive bids or not. Do you decline to answer that question?

A. I did not think I was losing anything in the way I was buying, if that is competition.

Q. I will put it this way: At the time you bought these nails from the American Steel & Wire Company, did you take bids on the same quantities for the same deliveries from other manufacturers?

A. I have asked other manufacturers for prices at the time.

Q. The question is at the time you bought keg nails from the American Steel & Wire Company, did you take bids from other manufacturers for the same quantities and the same deliveries?

A. I cannot speak specifically about that; I knew the general market conditions, that is what influenced me.

Q. Then when you have spoken of buying on competition you did not speak then of keg nails, did you?

A. Not particularly; no, sir.

Q. What is your best information and knowledge as to the price of the independents and of the Steel Corporation having been practically the same on keg nails since the Corporation was formed?

A. My impression is that the others were cheaper.

Q. At what time, at all times?

A. At all times.

Q. Can you give the prices of those independents?

A. Not familiar with them.

Q. Did you get the prices from them when you made these purchases from the American Steel & Wire Company of keg nails?

A. Very seldom.

Q. Now, how many times have you purchased keg nails from the American Steel & Wire Company where it was combined with other purchases as you have described; frequently?

A. Previous to this year probably three times a year.

Q. And how long have you been doing that, how far back would that go, three times a year?

A. As a guess it would cover a period of ten years, I should think.

Q. So then for a period of ten years you have been buying your keg nails practically in their entirety from the American Steel & Wire Company?

A. The majority of them.

Q. I am not asking you about the majorty.

A. You said practically?

Q. I said practically in their entirety.

A. Not in their entirety, no.

Q. Well, what per cent.?

A. Probably ninety per cent.

Q. Probably ninety per cent. the last ten years?

A. Yes, sir.

Q. Were all those nails combined with purchases of other things? You have spoken of a combination purchase where you put in nails along with some other purchases?

A. In most every instance.

Q. What kind of purchases were they combined with; what kind of steel products?

A. Barbed wire, galvanized wire.

Q. Then when you got a price, was the price on the whole lot of nails, barbed wire, and galvanized wire, as one purchase?

A. The prices were based on the relation between those three articles. Those three articles were related in price.

Q. What I mean to say is, did the price cover the whole purchase, the contract?

A. Yes.

Mr. Reed: You mean, Judge, was it a lump price? Is that the question?

Mr. Dickinson: I think it is plain.

Mr. Reed: I do not think the question is specific, Judge.

Mr. Dickinson: I think the question is perfectly plain. If you want to ask him any others later, it is all right.

Mr. Reed: It is not plain to me. I am anxious to know what it means.

(By request, the stenographer read the question referred to and the answer thereto as follows:)

"Q. What I mean to say is, did the price cover the whole purchase, the contract?

"A. Yes."

By Mr. Dickinson:

Q. What did you understand by that question?

A. That it was covered by a contract, in which the prices of the different articles were stipulated.

Q. But they were inter-related, were they; in getting the price of one, you got a price on the other, as an entire purchase?

A. If you will permit me: When I asked for a price on nails from the American Steel & Wire Company, I asked them to include the price of these other articles in the same contract, which were inter-related.

Q. The articles, then, were all combined in the proposition?

A. Yes.

Q. And in fixing the price, consideration was given to the fact that you had covered these various products that were covered by the contract?

A. Yes. That would enable me to make up a carload.

Q. At any time when you solicited from the American Steel & Wire Company a price for a carload, made up of nails and other products which were combined in such a sale, did you take any bid from any other manufacturer for the same carload lot? If so, state what manufacturer it was.

A. There was no such other manufacturer.

Q. There was no such other manufacturer?

A. Combining those lines.

Q. So, on those contracts, you dealt alone with the American Steel & Wire Company?

A. Yes.

Q. And there was no competitive bid there?

A. No.

Q. From whom did you get your miscellaneous nails?

A. From the American Steel & Wire Company.

Q. Were these miscellaneous nails combined in these contracts——

A. No.

Q. Or bought separately?

A. Separately.

Q. From whom did you buy your miscellaneous nails?

A. From the American Steel & Wire Company.

Q. Altogether?

A. Entirely.

Q. And for how long a time have you bought from them?

A. We sold the same make we are selling to-day before the American Steel & Wire Company owned the factory. The factory was bought out in Cleveland—called the H. P. Nail Company. We have sold the same make of nails probably for 25 years.

Q. And that particular make was known to your trade?

A. Yes.

Q. And you did not want any other make to offer to your trade?

A. We did not want any other, knowing of their ability to deliver, the manner of their package and the quality of the goods, and we had built up a trade on them.

Q. You had built up a trade on them?

A. Yes.

Q. And it would have been an injury to your trade to have shifted from that to some other kind of miscellaneous nails, would it not?

A. No. There are goods made of an equal quality, at a higher price.

Q. I know, but they are put up in a different way, are they not?

A. No; they are put up in the same way, but we would have had to pay more for them.

Q. You would have had to pay more?

A. Yes.

Q. It was a difference of quality of nails?

A. The same quality, but another make.

Q. And a higher price?

A. A higher price.

Q. Who made those?

A. The Atlas Tack Company.

Q. Did you ever buy from them?

A. Too high priced.

Q. Did you ever buy from them?

A. No. There was no necessity to buy from them. The price was too high.

Q. Did you ever take any bids from them?

A. Yes; we knew their prices.

Q. Did you take any bids from them?

A. I have asked them for prices. I have known what their prices were; they have told me their prices.

Q. When did you last ask them for a price?

A. It is too indefinite. I could not answer.

Q. Have you asked them for a price during the year 1912?

A. From general information and knowledge of their business I know their prices are always higher than those of the other makers.

I buy tacks from them. That is the only article I do not buy from the American Steel & Wire Company.

Q. You are going upon general knowledge of their price, then, and not bids from them?

A. From prices they have given me, and from their saying they would not meet prices of the American Steel & Wire Company.

Q. Tell me when they last said that to you.

A. I could not tell you specifically when.

Q. Did they say it to you last year?

A. I think in a conversation I had with them within six months.

Q. With whom?

A. With their New York agent.

Q. What is his name?

A. Hobart.

Q. What are his initials?

A. I think his initials are J. F.; 113 Chambers Street.

Q. When did you have that conversation?

A. I say I think it was within six months.

Q. Before that how long——

A. I could not tell you?

Q. Can you mention any other time?

A. No; because I was not particularly interested.

Q. You were not interested?

A. I would not charge my mind with it.

Q. In buying these miscellaneous nails, you did not take any bids on them; you dealt continuously with the American Steel & Wire Company?

A. Yes.

Q. And there were no competitive bids in those purchases, were there?

A. No, sir.

Q. Where do you get your barbed wire?

A. From the American Steel & Wire Company.

Q. How long have you been getting it from the American Steel & Wire Company?

A. For the last ten years.

Q. Did you buy that in one of these combination prices?

A. No, sir.

Q. You bought that separately?

A. Yes; we bought that on combination prices, in the contract.

Q. So there was no competitive bidding on that?

A. It was immaterial to us. We were ashamed to ask another manufacturer for a price, on account of the quantity we bought.

Q. I am not asking whether you were ashamed or not. I am asking you for the fact.

A. That is the reason I did not ask another manufacturer or another competitor.

Q. You did not buy that on any competitive bids, then?

A. In the contracts I had with the American Steel & Wire Company on the other goods which are embraced in it.

Q. Where do you buy your galvanized wire?

A. Mostly from Igoe Brothers.

Q. What quantity of that do you buy a year?

A. About five tons probably.

Q. How long have you been buying from them?

A. At times, for probably six or seven years.

Q. From whom else have you bought within that time, the last ten years?

A. The American Steel & Wire Company.

Q. What proportion of the galvanized wire in the last ten years have you bought from the American Steel & Wire Company?

A. Probably 25 per cent.

Q. Now, from whom did you buy last year?

A. From them, Igoe Brothers.

Q. And the American Steel & Wire Company?

A. No.

Q. All from Igoe Brothers?

A. Yes.

Q. In 1910?

A. The reason I bought was on account of the price; that is the reason I bought.

Q. That was the reason?

A. Yes, I bought from them on account of the price. I asked the American Steel & Wire Company for prices.

Q. I didn't ask you that; I am asking from whom you bought.

A. Igoe Brothers.

Q. In 1910 from Igoe Brothers?

A. Igoe Brothers, yes.

Q. The whole purchases from Igoe Brothers in 1910?

A. No.

Q. Whom else did you buy from?

A. American Steel & Wire Company.

Q. So in 1910 you divided it?

A. Yes.

Q. In what proportion?

A. About 25 per cent., as near as I can remember.

Q. I did not know that you used that 25 per cent. for that particular year. I thought maybe you meant that as an average.

A. No; we buy it put up in two different ways, one way is the package we buy from the American Steel & Wire Company, and the other way from Igoe Brothers, on account of the price, although each had an opportunity to bid.

Q. What is the difference between the two ways they put them up?

A. One is done up in bundles of 63 pounds, and the other in bundles of five pounds.

Q. Do Igoe Brothers put it up in five pounds or 63 pounds, or both?

A. Both.

Q. How does the American Steel & Wire Company put it up?

A. They do both.

Q. Did you buy all of the one kind from one, and the other from the other, or did you divide between the two the different kinds of packages, according to form of packing?

A. The larger percentage in large bundles from the American Steel & Wire Company, and the larger percentage of the five pound bundles from Igoe Brothers.

Q. When you spoke of 25 per cent., were you speaking of tonnage or speaking of money value?

A. Tonnage.

Q. Your annealed wire: How much of that did you buy in 1902?

A. We are not large buyers of that; probably a couple of tons a year.

Q. What would that be worth?

A. It comes assorted sizes; probably it would average up about three cents a pound.

Q. Well, your purchases in that would not be over $150 a year, would they?

A. Not over that; I should think not. You can get a good deal of wire for that.

Q. In length?

A. Yes, both ways.

Q. From whom do you get that?

A. Wickwire Brothers, Wright Wire Company, Igoe Brothers and the American Steel & Wire Company.

Q. Let us take the year 1902. Did you divide up that less than $200 purchase between all those people?

A. I cannot answer.

Q. Did you buy any of that from the American Steel & Wire Company in that joint contract let that you spoke of?

A. I would think so.

Q. Now, how often were such purchases as annealed wire included in such joint contract purchases from the American Steel & Wire Company, frequently?

A. No, we do not use much of it.

Q. I am not speaking of the quantity of it, but the time.

A. That would regulate the stock, the condition of our stock; it would not vary much on that.

Q. Well, at any rate at times that these purchases were included in the joint contracts, such as you have described, they went in on their entire price?

A. No, on that stuff I always get a price from different makers and buy accordingly.

Q. Didn't you say that some of that was included in these carload purchases, where there was a variety of products gotten from the American Steel & Wire Company?

A. When the price was right.

Q. What do you mean by "when the price was right?"

A. We call in the hardware trade the price right when we buy at the lowest price.

Q. The price on that would be like the other things, it would be influenced by the fact that you were buying a variety of things at the same time in a carload lot?

A. No; I think the manufacturers of that material regulate it according to the stock on hand, of themselves.

Q. By manufacturers according to the stock on hand?

A. Yes.

Q. Would that be the only article in this combination purchase where the price would not be affected by the fact of the combination purchase?

A. I think that has influenced it more than in any other line. Some of the manufacturers, for instance like the Wright Wire Company, they always say it is a by-product with them; it is cut off from some other work.

Q. What I am trying to get at is this, whether or not that was the only article included in this combination purchase where the price made by the American Steel & Wire Company was not influenced by the fact of the joint purchases in the combination contract.

A. I do not think the influence would bear in that case very materially.

Q. Well, it was a very small amount comparatively, wasn't it?

A. Yes.

Q. And you mean to say that in putting that in with your order, combined with the other things, that particular thing

went at a competitive price, and on a different basis from the others that were in this combined order?

A. In some of that our profits were larger in proportion than on other articles, and we could afford to pay a little more to one manufacturer than to another.

Q. As a matter of fact do you undertake, Mr. Clinch, to say that you have any recollection as to the prices on that annealed wire in these combination contracts being affected by the fact that it went in as one of the articles in the combination sale? Have you any recollection of that one way or the other?

A. No, sir.

Q. Then you cannot say that those purchases at those particular times of annealed wire were made on a competitive basis, can you?

A. I do not know the specific time. For instance I have now on my desk quotations from three manufacturers on stone wire, annealed wire, and that is the way I have been buying it for years.

Q. I am not asking you about what you may do, but what you have done.

A. That is what I have done in the past.

Q. Is that the only answer you want to give to that question?

A. I don't see how I can answer it any more intelligently than that.

Q. Take barbed wire; how much barbed wire do you buy?

A. I haven't bought any this year.

Q. How much did you buy in 1912?

A. I cannot tell without looking at my books; there is so little it amounts to nothing; it might amount to five tons.

Q. What is it worth a ton, about?

A. About $24 or $25.

Q. So that would be less than $200, would it not?

A. Yes.

Q. And barbed wire, would that be the same on an average for the last ten years?

A. Yes.

Q. You said you were always hearing rumors of cuts under the market price. What do you mean by market price in that connection?

A. General information in the market.

Q. As announced through the papers?

A. As announced by word of mouth.

(Whereupon an adjournment was taken until to-morrow, Wednesday, October 22, 1913, at 10:30 o'clock a. m.)

ONE HUNDREDTH DAY.

EMPIRE BUILDING,
71 Broadway, New York City.

Wednesday, October 22, 1913.

Before Special Examiner JOHN ARTHUR BROWN.

Present on behalf of the United States, MR. DICKINSON and MR. COLTON.

Present on behalf of the defendants, MR. LINDABURY, MR. SEVERANCE, MR. BOLLING and MR. REED.

FRANK S. WITHERBEE

was called as a witness on behalf of the defendants, and being first duly sworn, testified as follows:

DIRECT EXAMINATION

By MR. REED:

Q. Where do you live?

A. Port Henry, New York.

Q. What is your age?

A. Sixty-two.

Q. What is your occupation?

A. Iron ore mining.

Q. How long have you been in the business of iron ore mining?

A. Since 1875.

Q. With what company did you commence the business?

A. Witherbee, Sherman & Company.

Q. Have you been with that same company ever since?

A. Yes, sir. I am its president.

Q. It is a corporation now, is it?

A. Yes, sir.

Q. How long have Witherbee, Sherman & Company been engaged in the iron ore business?

A. Since 1849.

Q. And in what district does it now operate?

A. I should put it as the Port Henry or Mineville District.

Q. That is in the Adirondack section of New York?

A. It is.

Q. Do Witherbee, Sherman & Company own or control ores in any other district than the Adirondack district?

A. Yes; we have about nine thousand acres in Cuba.

Q. Are you mining your Cuban ore at the present time?

A. Not yet.

Q. Do you expect to do it in the near future?

A. Yes, sir.

Q. Where have the mining operations of Witherbee, Sherman & Company been conducted?

A. Near Mineville, New York.

Q. How long has that company been engaged in mining?

A. Since 1849.

Q. Always in the same district?

A. Yes.

Q. How many acres has your company in the Mineville district?

A. About 62,000 acres. I want to explain that a little further; in the Mineville and Ausable district, which lies about fifty miles north of Mineville we have about 62,000 acres.

Q. That is in the Adirondack region as a whole?

A. Yes, sir.

Q. 62,000 acres represents your entire holding of Adirondack ore lands?

A. Yes, sir.

Q. Over how many acres of your Adirondack holdings have mining operations been carried on since 1849?

A. Less than 1,000 acres.

Q. You mean that in mining there since 1849 less than 1,000 of your 62,000 acres have been worked?

A. I do.

Q. Are those 1,000 acres or less exhausted?

A. Oh, no.

Q. You do not mean, then, that you have exhausted 1,000 acres?

A. There is more ore in sight on the 1,000 acres now than there was at the time we started operations.

Q. Have you personally made any estimate of the tonnage of your ores in the Mineville region and in the Ausable region, or in the two combined?

A. Not directly; but the testimony of Mr. Nason, I suppose——

MR. DICKINSON: We object. Have you read the testimony of Mr. Nason?

THE WITNESS: I have.

MR. DICKINSON: In this case?

THE WITNESS: Yes.

By MR. REED:

Q. I think you answer the question if you say you have not personally done it. That is what you mean, is it?

A. Yes.

Q. Who is the person best qualified to give us information on that point?

MR. DICKINSON: I object to that on the ground that the witness is not qualified to give an opinion on that.

By MR. REED:

Q. Will you answer, please?

A. Mr. Nason. He is the only one who has really made a close examination.

Q. That is Mr. Frank L. Nason?

A. Yes.

Q. Has he done any work for your company in the past?

A. Yes; but not along the line of making an estimate. It was for outside parties.

Q. He has made an estimate on your property, has he?

A. The individual properties—individual mines, I will put it.

Q. Tell us about this Ausable district, Mr. Witherbee: Is that a district that is known also as the Arnold district?

A. Yes.

Q. Ausable and Arnold, then, are two names for the same district?

A. Arnold is a mine in the Ausable district.

Q. I see.

At the present time what quantity of iron ore are you mining from your property at Mineville?

A. From our own and affiliated companies, from 1,000,000 to 1,200,000 tons of crude ore annually.

Q. And you do some concentrating, too?

A. Yes; a large amount.

Q. Then your shipments are of crude ore and of concentrates, are they?

A. Yes.

Q. Do you ship any crude ore which is not suitable for furnace use—which requires concentration at some other point; that is what I mean.

A. We concentrate about two-thirds of our output, one-third being shipped direct as crude ore. The concentration consists of two kinds: One for the elimination of the silica or gangue, and the crude ore in that case would average from 35 to 50 per cent.; the other kind is for the elimination of the phosphorus, the crude ore running about 60 per cent., and the concentrates in both cases being from 63 to 65 per cent.

Q. In iron?

A. In iron.

Q. About one-third of your ore, you say, is shipped in its crude form. Is that ore such that it is suitable for immediate use in the furnace?

A. Yes; it runs 60 per cent.

Q. It did not require concentration by the purchaser?

A. No.

Q. How about the phosphorus content of your ores, Mr. Witherbee? In order that we may get a fairly accurate knowledge of the nature of these Adirondack ores, I wish you would describe their phosphorus analyses.

A. The range of phosphorus in our ores will go from .001—that is one-thousandth of one per cent., which is probably the lowest in the world—up to say two per cent., differing as to the grade of ore and the mines.

Q. Where your ore runs as high as two per cent. in phos

phorus, is it possible by concentrating to remove any of this phosphorus?

A. Yes, that is reduced to about five-tenths, and if ground fine enough could be reduced to Bessemer limits.

Q. So that you can make Bessemer ore even out of the highest grade phosphorus ore that you have?

A. Yes.

Q. Now, have you much of this 60 per cent. natural ore?

A. Yes; the largest veins we have are of that grade.

Q. Are of that grade?

A. Yes. That is used for three purposes also; one for puddling in a rolling mill, the other for additions in the open hearth furnace, and also for use in the blast furnaces.

Q. What part of your ore would you say would contain less than .03 in phosphorus?

A. Well, I should say 70 per cent.

Q. That is all, then, within Bessemer limit?

A. Well within the Bessemer limit.

Q. In its natural condition?

A. In its natural condition.

Q. And requires no concentration to eliminate the phosphorus?

A. No, the phosphorus is incidentally eliminated in the concentration.

Q. You have your own concentrating plant, have you?

A. Yes, we have four separate plants, with a capacity of 3,000 tons a day.

Q. Where are they located?

A. Mineville.

Q. To what furnaces do you ship your ore?

A. Well, we ship ore for different purposes to practically every iron and steel and blast furnace plant east of the Allegheny Mountains.

Q. Do you ship any to Buffalo?

A. Yes.

Q. To what plant there?

A. The Lackawanna Steel Company.

Q. What kind of ore do you ship to Buffalo, to the Lackawanna Steel Company?

A. Bessemer ore, and also ore for the open hearth additions.

Q. How does that ore range in iron content?

A. The Bessemer ore is guaranteed 65 per cent. The open hearth ore is about 60 per cent.

Q. What is the average phosphorus content of the Bessemer ore that you ship to them?

A. About .025.

Q. Is there any ore that you know of in the Lake Superior district that runs so high as 65 per cent. iron, and at the same time so low as .025 in phosphorus?

MR. DICKINSON: That is objected to on the ground that the witness has not qualified to speak of the Lake Superior district, and has shown no intimacy or knowledge of those ores, or that he has been there and seen the analysis.

THE WITNESS: I have seen the official analyses quoted, and I have never seen one as high as 65. The guaranteed grade of Bessemer ore in the Lake Superior district is 55 per cent.

MR. DICKINSON: That is objected to in so far as he bases the answer on quotations which he has seen, as secondary and incompetent.

By MR. REED:

Q. Do you know of any mine in the Lake Superior district or elsewhere in the United States which can produce iron ore with phosphorus content as low as .025?

A. Yes, the Chateaugay mines?

Q. Where are they?

A. In the Adirondack region.

Q. Outside of the Adirondack region, do you know of any mine in the United States that can produce it?

A. I do not.

Q. Do you know anything of the analyses of the Pewabic ore from the Gogebic range?

A. I do.

Q. How does that ore run in phosphorus content?

A. It runs in phosphorus content, I think, under .02.

Q. How does that run in iron?

A. I think about 54 per cent.

Q. Do you know of any iron ore running as high in iron and as low in phosphorus as these shipments which you are making from the Adirondacks to the Lackawanna Company at Buffalo, of Bessemer ore?

A. Except Chateaugay.

Q. Who owns the Chateaugay mine?

A. It belongs to the Chateaugay Ore & Iron Company.

Q. Is that controlled by any steel or furnace company?

A. No, sir.

Q. So far as you know?

A. So far as I know.

Q. Do you make any shipments to the eastern Pennsylvania furnaces?

A. All of them nearly.

Q. Do you ship to Bethlehem?

A. We do.

Q. What character of ore do you ship to Bethlehem?

A. Three different grades, ore for open hearth additions; what are known as our old bed concentrates, which run about 65 per cent. in iron and .50 in phosphorus; and what is known as our harmony grade, which runs 63 per cent. iron and down to about .10 phosphorus, and also our Bessemer ore, which runs 65 per cent. in iron and .025 phosphorus, the same as we have shipped to the Lackawanna Company.

Q. All these shipments are made by rail, are they?

A. By rail and water.

Q. That is to Bethlehem?

A. To Bethlehem.

Q. How about the shipments to the Lackawanna Company?

A. By rail.

Q. On the completion of the New York State barge canal, Mr. Witherbee, how will your shipments be made to Buffalo?

A. By water.

Q. And how to New York?

A. By water.

Q. Have you made any estimates of the cost of mining,

preparing and delivering this 60 per cent. crude Adirondack ore at New York City after the completion of the barge canal?

A. We have made some very close estimates and figures on this matter, and we calculate that we can deliver ore at a cost in New York harbor of from three to six cents a unit according to the grade of the ore.

MR. DICKINSON: That is objected to as based not upon experience, but upon mere theoretical expectation and not a fact, but a prophesy.

By MR. REED:

Q. What kind of ore do you expect to be able to deliver in New York at a price as low as three cents per unit?

A. Our crude ore.

Q. And that runs?

A. Sixty per cent. in iron.

Q. And in phosphorus?

A. About one and a quarter.

Q. A basic ore?

A. Yes, it would be a basic ore, basic or foundry.

Q. At what price do you expect to be able to deliver at New York these 65 per cent. iron concentrates of yours?

MR. DICKINSON: Same objection.

THE WITNESS: About four cents a unit.

By MR. REED:

Q. Take these very low phosphorus concentrates that you have told us of, which run 65 per cent. in iron and around .002 in phosphorus. At what price do you expect to be able to mine and concentrate and deliver those ores at New York?

MR. DICKINSON: Same objection.

THE WITNESS: About six cents a unit.

By MR. REED:

Q. This includes mining costs, doesn't it?

A. Yes, sir.

Q. Concentrating cost?

A. Yes, sir.

Q. And transportation?

A. Transportation, and depreciation.

Q. And depreciation?

A. Depreciation; yes, sir.

Q. Take those same ores delivered at Buffalo, after the completion of the barge canal of course, what additional cost do you estimate will be incurred.

MR. DICKINSON: The same objection.

THE WITNESS: About 20 cents.

By MR. REED:

Q. Twenty cents what, per ton?

A. Yes, higher than New York harbor.

Q. That is to say, for a 60 per cent. ore it will cost about one-third cent per unit more to deliver at Buffalo than at New York?

A. Yes, sir.

Q. With the 65 per cent. ore something less than one-third of a cent per unit?

A. It would be the difference in the vesseling, that is all.

Q. What do you know about these vessel rates over the barge canal?

A. In the first place, I was on the Roosevelt Commission, which formulated the barge canal system; I have kept a very close watch of it and we have consulted three separate marine engineers as to the cost of transportation, and we have had a very long and varied experience with the present canal, which gives us the benefit of what can be done. Besides that I have made a special study of canal costs in Europe.

Q. What is your present expectation as to the time when this barge canal will be ready for ore shipments?

A. The fall of 1915 or the spring of 1916.

Q. I do not want to inquire too far into your private business, Mr. Witherbee, but I wish that you would tell us in some way about what price is being paid by the Lackawanna Company for this high quality of ore which you are shipping to them at Buffalo?

A. It is figured on a basis of what the Lake Superior ore would be worth with the same iron and phosphorus content.

Q. That is, if there were any Lake Superior ore as good as this that you are sending?

A. Yes.

Q. This would be the ruling price of it?

A. Yes, sir.

Q. Based upon the price of other Lake Superior ores today?

A. Yes, and the agreed upon table of the buyers of ore with the same iron and phosphorus content which has been in existence in the Lake Superior region for a good many years.

Q. And is this a profitable business of your company, then, the mining, shipping and concentrating?

MR. DICKINSON: Objected to as incompetent and irrelevant?

THE WITNESS: It is.

By MR. REED:

Q. I think you said that all of the present shipments were going by rail.

A. Yes, sir.

Q. And is the rail freight higher than the barge canal freight you expect to pay when the barge canal is finished?

A. To Buffalo it is nearly a dollar a ton higher, and to New York about 75 a ton higher.

Q. Mr. Witherbee, are you mining and shipping all of the ore that your Mineville properties will produce?

A. No, sir.

Q. Are you mining or shipping any ore from your Ausable properties?

A. No, sir.

Q. Not using them at all?

A. No, sir.

Q. Are they in shape to be opened and developed?

A. Yes, sir.

Q. Why don't you open and developed your Ausable properties?

MR. DICKINSON: That is objected to as irrelevant.

THE WITNESS: Because we can supply the present demand from the Mineville district.

By MR. REED:

Q. There is no separate demand to justify the additional mining?

A. No, sir; there is not.

Q. Why don't you open up and ship from your Cuban properties?

MR. DICKINSON: Objected to as irrelevant.

THE WITNESS: For the same reason.

By MR. REED:

Q. You cannot get the customers?

A. No, sir.

Q. Are you making any plans, Mr. Witherbee, to dispose of your ores from the Adirondacks and Cuba which you are unable to sell to-day?

MR. DICKINSON: Excepted to as irrelevant.

THE WITNESS: We are contemplating the erection of two blast furnaces in New York harbor for that purpose.

By MR. REED:

Q. In what part of New York harbor will they be built?

A. In Perth Amboy.

Q. Public announcement of that has been already made, has it not?

A. It has.

Q. Have you planned to erect any steel works in conjunction with those blast furnaces?

MR. DICKINSON: That is excepted to as irrelevant.

THE WITNESS: Not at the start, although we may build in connection with our blast furnaces a cast iron pipe foundry.

By MR. REED:

Q. Why are you building blast furnaces?

MR. DICKINSON: That is excepted to as irrelevant.

THE WITNESS: So as to increase the sales of our ore. We

have a large undeveloped ore field that we wish to obtain an output for.

By Mr. Reed:

Q. On what ores do you expect to run these New York harbor furnaces that you are about to build?

A. Lake Champlain ores, Cuban ores, and probably from the Lake Superior district, as we will have a rate on ore from Buffalo to New York which will put the price of Lake Superior ore less in New York harbor than to Pittsburgh at the present time, and also upon foreign ores.

Q. Do you mean to say that on the completion of the barge canal it will be possible to deliver Lake Superior ores cheaper at New York than they are now being delivered at Pittsburgh?

A. I do. The rate of freight from Buffalo to New York we estimate at 60 cents, and the established rate from Lake Erie to Pittsburgh points is about 88 cents, I think.

Mr. Dickinson: This is objected to as irrelevant, not based upon existing facts.

By Mr. Reed:

Q. As to your Cuban deposits, in what part of Cuba are they?

A. About 20 miles northwest of Camagney.

Q. How do these Camagney deposits of yours contrast with the other north shore Cuban deposits, first in the matter of iron content?

A. I should think about two per cent. leaner.

Q. About two per cent. leaner than the average?

A. Yes.

Q. How do they contrast in the depth of the deposits?

Mr. Dickinson: This is objected to on the ground that the witness has not qualified himself to speak in respect to the other deposits.

The Witness: They are much deeper. We have bored a number of holes on our properties. In one instance we have been through 123 feet of ore without striking the footwall. In fact, we never struck the foot wall wherever we bored. The ore carries less moisture, and has no cover; that is, it is practically the soil.

By Mr. Reed:

Q. When you say that the ores are two per cent. leaner, you mean two per cent. leaner after drying?

A. No, in the crude state.

Q. How many acres of ore lands have you in Cuba?

A. 9,000.

Q. Are you making any preparations for the development of those properties and the shipment of those ores?

A. No; we expect to when our New York Harbor proposition takes effect.

Q. Are you pretty familiar with the iron ores of the United States, Mr. Witherbee?

A. I am. I have visited nearly all of the ore fields.

Q. You have been in the business almost 40 years, I think you testified?

A. Yes, sir.

Q. And you have visited the different ore fields of the country?

A. Yes; in Minnesota a good many times; in Alabama also a good many times; I have visited the Missouri fields, the New Jersey and the New York fields, some Canadian fields, Ohio fields and the Pennsylvania fields.

Q. What can you tell us about the amount of ore available for use to-day in the United States as contrasted with the amount of such ore that appeared to be available in the past?

Mr. Dickinson: This is objected to first on the ground that the question does not define what is meant by "available," fixes no standard, and it also does not define what period is covered by the expression "in the past."

The Witness: I think the amount of ore in what you might call "in sight" in the United States is very much larger to-day than it ever has been before. One of the reasons for this is that a large part of the low grade magnetites along the Appalachian chain can now be made merchantable through magnetic concentration.

By Mr. Reed:

Q. How long has that been so?

A. I should think in the last seven or eight years.

Q. Is it possible by magnetic concentration to make these ores available for use to-day and still be within a cost which is not prohibitive?

MR. DICKINSON: This is objected to on the ground that the expression "available" is not defined, and that the expression "prohibitive" is too vague and indefienite.

THE WITNESS: Yes; if the crude ore runs above 35 per cent. in iron.

By MR. REED:

Q. Is there a large or a small quantity of magnetites in the Appalachian chain running 35 per cent. and over in iron?

A. Enormous quantities.

Q. In what State do they lie, Mr. Witherbee?

A. From New York to Tennessee.

Q. In your experience in the ore business, have you seen any indication of the existence of an ore monopoly?

MR. DICKINSON: This is objected to on the ground that it calls merely for a conclusion of the witness and a definition of "monopoly," without calling for the facts upon which the witness may base his opinion, and therefore that they are not revealed so as to permit of an estimate of the value of the witness' opinion.

(By request, the pending question was repeated as follows:)

"Q. In your experience in the ore business, have you seen any indication of the existence of an ore monopoly?"

THE WITNESS: I have not.

By MR. REED:

Q. In your close acquaintance with the ore business and your experience in the ore business have you observed anything to indicate that the United States Steel Corporation has a monopoly of available iron ores of the country?

MR. DICKINSON: The same objection.

THE WITNESS: I have not. My judgment is that the Steel Corporation owns a very much smaller proportion of the

available ores of the United States to-day than it did when it was formed—of the known deposits.

By Mr. Reed:

Q. Their acquisitions have not kept up with the development?

A. They have not; nor with the proportion of finished products, I should say, either.

Q. Mr. Witherbee, did you ever have any connection with the Tennessee Coal, Iron & Railroad Company?

A. I was director from 1899 to 1906; vice-president from 1901, I think it was, to 1906.

Q. How did you come to accept a position on the board of directors of that company?

Mr. Dickinson: Objected to as irrelevant.

The Witness: I had two friends who were very largely interested in the company, and the board did not have any man who was well posted on iron and mining matters, and I was asked to go on by them.

By Mr. Reed:

Q. After you become a director, did you visit the plants at Birmingham?

A. Frequently.

Q. In what condition did you find them?

Mr. Dickinson: Objected to as irrelevant.

The Witness: At the start, in a most dilapidated condition.

Mr. Dickinson: At what time is this?

Mr. Reed: This was in 1899.

The Witness: 1899.

By Mr. Reed:

Q. In what shape were the ore mines?

A. They were in a most unfortunate condition as to their development, and the mining plants most antiquated and inefficient.

Mr. Dickinson: Excepted to as irrelevant.

By Mr. Reed:

Q. In what shape were the blast furnaces?

Mr. Dickinson: The same objection.

The Witness: The same condition.

By Mr. Reed:

Q. In what shape were the coal mines?

Mr. Dickinson: The same objection.

The Witness: The same condition.

By Mr. Reed:

Q. Did the company have a steel works then?

A. They were completing one, building one.

Q. What was your opinion of the steel works when you saw it?

Mr. Dickinson: The same exception.

The Witness: It was in too incomplete a condition to pass judgment on at the start.

By Mr. Reed:

Q. How did you feel about the whole proposition at that time?

Mr. Dickinson: The same objection.

The Witness: I made a trip down to Alabama as soon as I was elected director, and I found the mining conditions there so unsatisfactory that I came home and reported to my friends that unless the management was changed I should resign. I suggested that the most necessary thing to do was to put a man at the head of the company who was familiar with mining conditions, because it took more tons of ore and coal to produce a ton of pig iron than almost any other locality in the world, on account of the low grade of both the coal and the ore, and I suggested that they elect Mr. D. H. Bacon of Duluth, President of the Company, as he was, I knew, a thoroughly competent iron ore man.

By Mr. Reed:

Q. Was that done?

A. It was.

MR. DICKINSON: Did he give the date of that?

By MR. REED:

Q. When was it that Mr. Bacon was elected, if you remember?

A. I think 1900.

Q. After that were any steps taken toward rehabilitating the mines?

A. Yes.

Q. And the furnaces and the steel works?

MR. DICKINSON: Objected to, as irrelevant.

THE WITNESS: We suspended dividends and borrowed some money and went to work to build new mining plants.

By MR. REED:

Q. By the time that the Schley-Gates-Topping Syndicate got control of the company, which I think was about 1906, how much did you spend toward improvement of the properties?

MR. DICKINSON: Excepted to as irrelevant.

THE WITNESS: I think about $6,000,000.

By MR. REED:

Q. Was the work finished, Mr. Witherbee?

A. It was not.

Q. Were the steel works finished?

A. Yes, but not in good condition; they had been faulty in their design.

Q. Did you remain on the board after this new group acquired control of the company?

MR. DICKINSON: That is excepted to.

THE WITNESS: I did, about three months.

By MR. REED:

Q. When plans were made by the new administration, about how much money did it plan to put into the property for its improvement?

MR. DICKINSON: The same exception.

THE WITNESS: They planned to put in about $8,000,000 to complete and enlarge the steel plant and improve the blast furnaces.

By Mr. Reed:

Q. Was any suggestion made as to the source from which this $8,000,000 should be realized?

Mr. Dickinson: The same exception.

The Witness: Yes. I remember that at the board meeting it was suggested that the amount of money be raised around the table, which the syndicate could make use of.

By Mr. Reed:

Q. Who made that suggestion?

Mr. Dickinson: The same exception.

The Witness: John W. Gates.

By Mr. Reed:

Q. How did you personally receive that suggestion?

Mr. Dickinson: Excepted to as irrelevant.

The Witness: I resigned, because I did not want to put my share of that amount of money in the plant, because I didn't think $8,000,000 was sufficient to properly develop it.

By Mr. Reed:

Q. Have you any recollection of a conversation with Mr. James Gayley in New York with regard to the properties of the Tennessee Company?

A. I have.

Q. You have a recollection?

A. Yes.

Q. When was that, as near as you can remember it?

A. Well, I think about 1904 or 1905.

Q. What was your motive in speaking to Mr. Gayley about that property?

Mr. Dickinson: That is excepted to as irrelevant.

The Witness: Why, I felt that the best interests of the Tennessee Company would be conserved if the Corporation purchased the property; it had been difficult for us to raise funds to develop it properly, and I also thought that its output should be diversified, and I knew of no better way of securing that end than by the Corporation taking it over.

MR. DICKINSON: By the Corporation you mean the United States Steel Corporation?

THE WITNESS: The United States Steel Corporation.

By MR. REED:

Q. Did you tell Mr. Gayley that you were anxious for the Corporation to buy it?

MR. DICKINSON: That is objected to as irrelevant.

THE WITNESS: I did not, but I wanted to impress upon him the quantity of raw material, hoping that he would repeat that to some of the influential people in the Steel Corporation, so that they might be made to investigate it.

By MR. REED:

Q. Did you let Mr. Gayley see that your motive or your purpose was to bring about a purchase by the Steel Corporation?

MR. DICKINSON: That is excepted to as irrelevant.

THE WITNESS: I did not, because I feared the result of that.

MR. REED: You may cross examine.

CROSS EXAMINATION

By MR. COLTON:

Q. You testified a few years ago before the Tariff Committee, didn't you?

A. Well, I have several times.

MR. REED: What tariff committee is that?

MR. COLTON: I think it was the Payne Committee.

THE WITNESS: And the Dingley also.

MR. REED: You mean the Ways and Means Committee?

MR. COLTON: Yes.

MR. REED: Of the House?

MR. COLTON: I think it was of the House.

THE WITNESS: I think so, too.

By MR. COLTON:

Q. And you testified in regard to the need of a duty on ore to protect your Port Henry ores?

A. I did.

Q. You testified that for a great many years the Witherbee-Sherman Company had been shipping ore from the Port Henry district; is that correct?

A. You mean my testimony before the Committee?

Q. No, here.

A. Yes, sir.

Q. And in concentrated ores your shipments have amounted for some years up to six or eight hundred thousand tons a year?

A. I should not say quite as much as that. I testified that two-thirds of our shipments were in concentrated form.

Q. In shipments, how much have your ores amounted to during the last ten years, per year?

A. I should say about—our allied interests—it was from 500,000 to 800,000 tons.

Q. Allied interests? What do you mean by "allied interests?"

A. Well, we have two other companies in the Port Henry district that we are interested in besides the Witherbee-Sherman Company.

Q. What are they?

A. The Cheever Iron Company and the Port Henry Company.

Q. Do you own the majority of the stock of those companies?

A. We do not.

Q. What is the relation between those companies and your company?

A. Simply we are stockholders and make our shipments over the same route.

Q. You own a considerable share of the stock in those companies?

A. Yes, sir.

Q. How much were your shipments in the year 1901, approximately, of your interests and the allied interests?

A. If you will allow me to consult my memorandum?

Q. You made a memorandum of the shipments for 1901?

A. I think I have got it here; I am not sure. 1901, was it?

Q. Yes, 1901.

A. 168,337 tons.

Q. How far back do your shipments go there, Mr. Witherbee?

A. To 1883.

Q. Would you give your shipments from 1895 to 1901 by years; I mean the shipments of your company and the allied companies that you have testified to.

A. From 1895 to 1901?

Q. Yes.

A. By years?

Q. Yes.

A. 1895, 166,963 tons.
1896, 142,317 tons.
1897, 170,501 tons.
1898, 76,098 tons.
1899, 302,470 tons.
1900, 140,765 tons.
1901, 168,337 tons.

Q. Would you give your shipments from 1901 to and inclusive of 1911?

MR. REED: Do these include Cheever Iron Company shipments?

THE WITNESS: That was only the last two or three years. I do not know as I can give that separate. I think I have got them all grouped.

By MR. COLTON:

Q. I want all that you have.

A. I can give them in the aggregate, but I could not give them separately.

1902, 369,578 tons.
1903, 373,762 tons.
1904, 379,898 tons.
1905, 622,217 tons.
1906, 563,695 tons.
1907, 641,891 tons.
1908, 373,133 tons.
1909, 739,064 tons.

1910, 807,721 tons.
1911, 665,100 tons.

MR. REED: Excuse me; may I ask a question as to 1912 and 1913, so as to have it all in one place, and you can except as irrelevant.

MR. COLTON: Yes, I except to it as irrelevant.

By MR. REED:

Q. You have 1913 complete, have you?

A. No, I have 1912 complete, and 1913 to September 1.

Q. Then I ask you for those figures.

A. 1912, 643,384 tons; and to September 1, 1913, 597,962 tons.

By MR. COLTON:

Q. Now, Mr. Witherbee, you follow the policy in reference to mining and shipping ore of large output and relatively small profit per ton, do you not?

A. Yes, sir.

Q. That has been your policy?

A. Yes, sir.

Q. A number of years ago your company sold into the Pittsburgh district, did it not?

A. About 25 years ago.

Q. About 25 years ago it was selling in the Pittsburgh district?

A. Yes, sir.

Q. Was it gradually driven out of the Pittsburgh district?

A. Yes, by the enlargement of the Soo locks.

Q. The Lake Superior ore gradually drove you out of the Pittsburgh district?

A. Yes, sir, it did.

Q. And from 1905, in which year your tonnage equalled 600,000 tons of shipments, to 1912, that was the last complete year, there has not been any very substantial change in the extent of your shipments, has there?

Between those two years there has been no substantial increase?

A. Between what years?

Q. Between 1905 and 1912.

A. Will you allow me to refer to my memorandum?

Q. Yes, you may refer to your memorandum.

A. 1905, 622,000; and 1912?

Q. Yes.

A. Now, they are very close; it exceeded that between times.

Q. The figures are there?

A. Between 1905 and 1912 we ran up.

Q. I say, the figures are there?

A. Yes, sir.

Q. Your market, since you have been driven out of the Pittsburgh market, as compared with the Pittsburgh steel district and the Ohio steel district and the Illinois steel district, is very limited, is it not?

A. It is limited to steel plants east of the Allegheny Mountains.

Q. And in proportion, that is a limited market, is it not?

A. Yes, compared with the output of steel.

Q. You were formerly connected with the Troy Steel & Iron Company, Mr. Witherbee?

A. I was its president and receiver.

Q. You were its president and receiver?

A. Yes, sir.

Q. At what time were you connected with that company?

A. I think from 1896 to 1899. I do not know when it went out of existence; I think in 1899.

Q. Were you a director as late as 1901 in that company?

A. I may have been. My recollection is not clear as to when the company was running.

Q. That company had rolling mills and steel plants and blast furnaces, did it not?

A. It had.

Q. What ore did that company use?

A. Largely our ore.

Q. Largely your ore?

A. Yes, sir.

Q. And that company had back of it the Rockefellers and the Morgans, had it not?

A. It had.

Q. It had good financial support in those men, did it not?

A. Yes; but not united. The Morgan interest was a stock interest and the Rockefeller interest was a bond interest, and they did not agree on a policy.

Q. What company drove that company out of business?

A. The Carnegie Steel Company.

Q. And the Carnegie Steel Company used the Lake Superior ores, did it not, primarily?

A. Yes; but it drove it out of existence not by the use of the ores; I think the cost of pig iron was lower at Troy than it was at Pittsburgh; it drove it out of business by its policy of going to our customers and telling them to get the best price they could from us and they would name fifty cents a ton lower; or, as one of the officials of the Carnegie Company put it: "We propose to strangle the Troy child at its birth."

Q. And it did strangle it, did it not?

A. Yes.

Q. Now, as to the cost of the Carnegie's manufacture of steel: Do you know, as a matter of fact, whether Carnegie was really making his pig iron as cheap as you were making your pig iron?

A. I think probably cheaper.

Q. You think Carnegie was probably making pig iron cheaper than yours?

A. Yes; as we had not been able to get our costs down, on account of just starting up. The Troy plant ran only about eighteen months, as I remember it, altogether. We had not been able to get our costs down to where they ought to be.

Q. That was an old company, was it not, Mr. Witherbee?

A. Oh, yes; but not in that form. It was one of the oldest companies in the United States, but——

Q. It had been——

MR. REED: Let him finish his answer, Mr. Colton.

THE WITNESS: It had been reorganized. They had used different ores, but when I had to do with it they had reorganized and had separate steel plants, new furnaces.

Q. What was it organized to manufacture when it was re organized?

A. Billets, for the open market.

Q. Was it well equipped?

A. It was as far as it went.

Q. No steel works had been built up to that time?

A. Yes; but in a different location.

Q. What steel works?

A. They were antiquated, and torn down before this one started.

Q. While you were with it was it contemplating simply the sale of billets, or was it contemplating the building of additional steel works?

A. We intended to have gone into wire, and possibly rails.

Q. It had manufactured rails previous to that, had it not?

A. Yes. We should have manufactured Bessemer basic rails, and in the past it had manufactured only Bessemer rails.

Q. That would have brought you in direct competition with the Carnegie Company, would it not?

A. No more so than we were.

Q. You were already in competition? In respect of what were you in competition with the Carnegie Company at that time?

A. Billets for the open market; chiefly with the Washburn & Moen——

Q. That would have added an additional item of competition——

Mr. Reed: One moment, Mr. Colton. Do you not want any answer completed?

Mr. Colton: I thought he had completed his answer.

By Mr. Colton:

Q. Had you finished your answer, Mr. Witherbee?

A. No.

(By request the stenographer read the unfinished answer of the witness, as follows:)

"A. Billets for the open market; chiefly with the Washburn & Moen——"

The Witness: Chiefly with the Washburn & Moen plant at Worcester. I remember a case where we started in with an initial sale at $22 for billets in Worcester, and the Carnegie Company pursued the policy I have outlined above, and before

we got through the contract, they had pushed us down to $16.50.

Q. When was that?

A. I think that was in 1897 or 1898; I am not sure which year. It was in the acute time of the depression in the steel trade.

Q. The addition of rails would have been an additional item of competition with the Carnegie Company, would it not?

A. Yes.

Q. When did you expect to begin the manufacture of rails?

A. We had no definite time in view.

Q. At what time were you planning to extend your works to the manufacture of either wire or rails or both?

A. We had no definite time in view. We were waiting for better business conditions.

Q. When did you take up for consideration this extending of your plant?

A. From the very start of the plant.

Q. And you had it under consideration?

A. We had.

Q. You spoke in your direct examination of bringing ore from the Lake Superior district to Staten Island as one of the possible plans that you had in contemplation?

A. I did—not Staten Island, but a point directly opposite in the State of New Jersey.

Q. Going back to the Troy Company for a moment: That company was subsequently acquired by the United States Steel Corporation, was it not?

A. It was.

Q. And it was dismantled?

A. I do not think so.

Q. Has it ever been used or operated since?

A. It has not been used. Some parts of it were taken away, but the plant is still there.

(By request of Mr. Colton the stenographer repeated the third preceding question and answer as follows:

"Q. You spoke in your direct examination of bringing ore from the Lake Superior district to Staten Island as one of the possible plans that you had in contemplation?

"A. I did—not Staten Island, but a point directly opposite in the State of New Jersey."

By Mr. Colton:

Q. What do you figure that ore can be delivered, as the complete cost of ore from Buffalo, including loading at Buffalo and including docking at the point that you spoke of as opposite Staten Island? I mean the cost of transportation. What do you figure that to be?

A. About sixty cents, from the best calculations I can make.

Q. Assuming that the United States Steel Corporation has several hundred million tons of ore averaging 61 per cent. iron and above, and assuming that it can deliver the ore to boats at Buffalo at a dollar and ten cents a ton, its cost per unit would be slightly less than three cents a ton, would it not, at the point of delivery opposite Staten Island?

Mr. Reed: That is objected to because there is no evidence in this case that the Steel Corporation has several hundred million tons of such ore, and no evidence in this case that it can be mined and delivered at lower Lake ports at $1.10 a ton.

The Witness: Well, I think you have no right to assume that they have ore as rich as that.

By Mr. Colton:

Q. That is a matter of proof in the record. You may take that as my assumption in answering the question.

A. All right.

Yes; that would make the ore delivered—61 per cent. would be about $1.70, as against our ore of about $1.80, with about the same units.

Q. You said your ore would cost you three to six cents a unit, did you not?

A. Yes.

Q. Mr. Witherbee, you have never had your ore carefully proved up, have you?

A. Where we are at present mining; in the present mining district we have.

Q. Owing to the difficulty of proving up your ore you have not had your reserves as a whole proved up, have you?

A. No.

Q. And you do not know the extent of your reserves as a whole, do you?

A. We know it in certain districts, where we have taken the trouble to ascertain it.

Q. But as a whole you have not had it proved up?

A. Not as a whole.

Q. There is considerable variation in the grade of ore in that district is there not?

A. Yes.

Q. What is the tonnage that you have actually proved up?

A. I can not tell you offhand, but I think it comes to somewhere around 40,000,000 tons. That is where we have diamond drilled it, I am positive we have that amount of ore.

Q. Your actually proved-up ore is about 40,000,000 tons, according to your recollection?

A. Within a very limited area.

Q. In the territory where you have proved it up?

MR. REED: Of which you have personal knowledge?

By MR. COLTON:

Q. (Continuing) Of which you have personal knowledge. I am not asking for anybody else's opinion.

A. Yes.

Q. There is very considerable difficulty in proving up ore in that district, is there not, owing to the way the ore is formed in lenses?

A. Yes and no; difficult as to perhaps the size of the lenses, but the magnetic attraction we know pretty well and the geological formation. We have a magnetic ore field, which is the easiest to prove up, in that region, so that the magnetic attraction indicates where ore may be, and you can go with a compass on the surface and find it, but to get at the quality——

Q. And the quantity?

A. And the size of the veins, you have to diamond drill.

Q. And that is a difficult operation?

A. Although the magnetic compass will give you a fairly good idea; that is, if it is fairly uniform over large areas it is apt to be a very thick deposit.

Q. Now, your ore runs somewhere from about 35 to 40 per cent. iron up to 60 per cent. iron in its crude state?

A. Yes.

Q. And the cost per ton for concentrating ore running about 40 per cent. is about what?

A. Forty per cent., around 35 to 40 per cent.——

Q. Thirty-five to 40 per cent.?

A. Thirty-five to 40 per cent., that would be 60 or 65 cents.

Q. And does it vary in cost between that and 60 per cent.?

A. Sixty per cent. would cost about 30 to 35 cents.

Q. What would be the present transportation cost to a point opposite Staten Island, without any change in the barge canal, of shipping ore?

A. $1.10 a ton.

(By request of Mr. Reed the last three questions and answers were repeated by the stenographer.)

By Mr. Reed:

Q. Thirty to thirty-five cents to concentrate?

A. Yes, concentrating cost.

Q. Do you concentrate 60 per cent. ore?

A. Yes, to remove phosphorus.

By Mr. Colton:

Q. Have you figured out what your average cost per unit has been for iron ore during the last year?

A. I have not.

Q. You do not know what your ore costs on an average per unit, do you?

A. I know it varies some. We have six different grades of ore.

Q. And you could not make any statement that would be at all accurate as to the average cost of the ore?

A. I could not

Q. That is true of any year, is it not, between 1895 and 1913, of all years between those dates?

A. I could give the different mining costs of the different

properties in the different mines. The costs vary according to the mine, according to the quantity and quality of ore. I could not offhand.

Q. You could not give a general average statement for any one of the years just named?

A. I could not.

Q. How long have you been concentrating this ore, and by "you" I mean you or any one of the companies that you represent.

A. Well, our company first began concentration of the ore, of the high phosphorus ore, about 1852, and shipped that phosphorus to England. That was not very profitable, and the separators were very crude in those days. We started in really on a commercial scale in 1889, and we concentrated up to about 1893, when the depression came on, and then we started in our present system of concentration, I should think, about 1900 or 1901.

Q. In about 1900 and 1901 you were concentrating ore in very much the same general way that you are concentrating it now?

A. Yes.

Q. And for some years prior to that you had been concentrating ores on a considerable scale, had you not?

A. Yes.

Q. If I am not mistaken, in 1899 you concentrated more ore than you did for a number of years thereafter?

A. I do not think we concentrated any ore in 1899.

Q. You shipped more ore in that year, did you not?

A. We may have shipped more. I think that was what is known as a boom year.

Q. Your shipments included both classes of shipments?

A. No, I think it was all crude ore in 1899.

Q. Is all this ore magnetic ore?

A. Yes, except Cuban.

Q. And of that ore there have been no shipments?

A. No.

MR. REED: From your properties in Cuba?

THE WITNESS: Yes.

By Mr. Colton:

Q. You expressed some opinion, in answer to a question of mine, that you did not think I could assume that the Corporation had so many million tons of ore averaging as high as 61 per cent. iron. I would like to ask you whether you know Mr. Thomas F. Cole, formerly president of the Oliver Iron Mining Company.

A. I do, very well.

Q. Do you regard him as a man who would have a pretty accurate opinion as to the holdings of the Corporation in the Lake Superior district?

A. Yes.

Mr. Reed: That is objected to as not cross examination.

The Witness: I do, but I think the analysis he gave must have been of the ore with the moisture excluded. If moisture is deducted it would range anywhere from 7 to 14 per cent., varying according to the Lake Superior district. Lake Superior ores carry moisture, while magnetites do not, and, of course, the moisture does not count with the consumer; a deduction has to be made. It is simply water chemically combined. The Corporation's ore may run to 60 or 61 per cent., with moisture eliminated. In other words, in selling the ore they always deduct the moisture.

By Mr. Colton:

Q. Be that as it may, would you undertake to set up your opinion as against his statement under oath that he thinks the United States Steel Corporation owns and controls the cream of the Mesabi range?

Mr. Reed: That is objected to as improper cross examination, as incompetent, and hearsay.

(The question was repeated by the stenographer.)

The Witness: I would not put my statement against his naturally.

By Mr. Colton:

Q. And you would not undertake to set up your statement against his statement that including the Hill lands, he is of

the opinion that the Corporation controlled in 1910 a little over two-thirds of all the ore in the Lake Superior district?

MR. REED: That is objected to for the same reason.

THE WITNESS: I have no positive information.

Q. You do not know what the costs of the Steel Corporation are of mining in the Mesabi range, do you?

A. I do not.

Q. And you would not undertake to say how much iron they had of an average analysis, dried at 212, above 61 per cent., would you?

A. I would not.

Q. Then your familiarity with the Lake Superior district is very general, is it not, Mr. Witherbee?

A. It is, although I have been there frequently.

Q. But you have not any accurate idea in your mind as to the comparative holdings of the United States Steel Corporation and the other companies in the State of Minnesota, have you?

A. Only as I have seen it stated in the Government reports.

Q. And those statements are something from 75 to 80 per cent. of the holdings; is that the kind of information that you have in reference to their holdings?

A. I should not think it would be as much as that.

Q. But in any case it would be merely matters of record of that kind that your information would be?

A. Yes, sir.

Q. Is that true of the entire Lake Superior district?

A. Yes.

Q. Now you spoke of having had something to do with the Tennessee Company for a number of years. How many years were you connected with the Tennessee Company?

A. From 1899 to 1906 as a director and vice-president.

Q. Was Bacon a competent man?

A. I thought he was; I knew very well of his experience in Lake Superior before he came to us.

Q. He had been connected with the Minnesota Iron Company?

A. Yes, and other companies before that.

Q. The Tennessee Company is one of the different companies in that district you had occasion to investigate, didn't you, its relative holdings.

A. I did.

Q. Which companies?

A. The Sloss-Sheffield Company, the Republic and Tennessee.

Q. About what percentage did it control of the ore controlled by these companies in the Birmingham district?

MR. REED: That is objected to as not cross examination and incompetent until it is shown that the witness made a personal investigation.

THE WITNESS: I only know this from the report of the experts.

MR. REED: Then I object to it.

By MR. COLTON:

Q. Who were the experts?

A. There were three. I do not know that I can recall but one, Mr. Perin; it was some time ago.

MR. COLTON: That is all.

REDIRECT EXAMINATION.

By MR. REED:

Q. Mr. Witherbee, on the completion of the barge canal will your company be able to sell these high grade ores of which you have told us at the lower Lake ports and in Pittsburgh in competition with Lake ores?

A. We hope to.

Q. That is your belief?

MR. DICKINSON: Belief is objected to as incompetent, mere expectation.

THE WITNESS: We expect to.

MR. REED: Mr. Shafer.

WILLIAM B. SHAFER, JR.

was called as a witness on behalf of the defendants, and being first duly sworn, testified as follows:

DIRECT EXAMINATION.

By MR. REED:

Q. Where do you live?

A. Glen Ridge, New Jersey.

Q. What is your occupation?

A. I am first vice-president of the Alfred E. Norton Company.

Q. In what business is that company engaged?

A. In the business of steel fabrication.

Q. How long has it been so engaged?

A. It has fabricated since 1909.

Q. How long have you, yourself, been an officer of that company?

A. Since 1905.

Q. What was your first office?

A. Secretary.

Q. And then you became first vice-president?

A. I became vice-president and then first vice-president, when we had two vice-presidents.

Q. Have you been an officer since 1909?

A. Yes, sir.

Q. Where are the shops of that company?

A. Boonton, New Jersey.

Q. What is the capacity of those shops in tonnage for a year?

A. About twenty thousand tons.

Q. What is the maximum output of your shops?

A. About 24,000 tons.

Q. In what year was that?

A. Last year.

Q. You were producing about 120 per cent. of your capacity?

A. No, just the other way. The maximum capacity is 24,000. I got that turned around. I did not understand your

question. The maximum capacity is 24,000 tons. Last year we turned out about 20,000 tons in the shop. I beg your pardon.

Q. From what companies do you buy your beams and other structural material, Mr. Shafer?

A. From the Carnegie Steel Company, from the Bethlehem Steel Company, the Phoenix Iron Company, from the Cambria, Jones & Laughlin, Eastern, Lukens Iron & Steel Company.

Q. Do you buy any from the Pennsylvania Steel Company?

A. Very little. We bought some little fabricated material, but no plain material.

Q. Do you buy any from Worth Brothers?

A. No, we have not.

Q. Do you buy usually on annual contracts for all of your requirements, or do you buy as jobs come along?

A. As jobs come along.

Q. And when you wish to buy some rolled material, do you inquire of the various manufacturers for their quotations?

A. In most cases, yes.

Q. And of what manufacturers do you seek quotations?

A. Why, our business has been largely confined to Bethlehem, Carnegie, Phoenix, and we also bought from Joseph T. Ryerson, who are middlemen; they are not producers themselves.

Q. You ask quotations from a number of different concerns, do you?

A. About four.

Q. And you receive quotations from all of those that you ask?

A. Yes, sir.

Q. Do the quotations that you receive in that way vary or are they uniform?

A. They vary.

Q. Do the quotations in response to particular inquiries vary between the different companies?

A. Yes, sir.

Q. How much do they vary, Mr. Shafer?

A. Oh, at times as much as $2 to $4 a ton.

Q. Is there any variation in their ability to deliver on your orders?

A. Yes, sir.

Q. What determines the letting of your contracts, then, among the different bidders?

A. Price and delivery.

Q. Delivery is sometimes very important?

A. Yes, very important.

Q. You usually let to the lowest bidder, do you?

A. Not always.

Q. Why would you not let to the lowest bidder on any contract?

A. Because of the urgency of deliveries.

Q. Do you find that some companies are willing to make deliveries out of turn and some are not?

A. That is rather a difficult question to make that as a definite statement. That is my belief, that for a premium some mills would make a preferential delivery.

MR. DICKINSON: This is objected to, the witness giving his belief, and the answer is incompetent unless he states knowledge of particular ones that do the things that are inquired about.

By MR. REED:

Q. Mr. Shafer, do you follow the prices for structural material that are quoted in the Iron Age?

A. Yes; in a general way.

Q. Are the prices that are quoted to you the same as the quotations that appear in the Iron Age?

A. Not always.

Q. Speaking generally, do you buy at prices that are different from those quoted in the Iron Age?

A. Yes.

Q. Generally speaking, can you get lower prices than those quoted in the Iron Age?

A. In a dull market, yes.

Q. Take a lively market: What is the experience?

A. We usually go for the party that can give us the delivery. Price is not always a factor.

Q. And in order to get delivery, do you ever have to pay more than the Iron Age quotations?

A. Yes, sir.

Q. Take this last year: What were the Iron Age prices on structural material?

A. They varied from about one twenty-five or one thirty-five to about one forty-five, Pittsburgh.

Q. What were the United States Steel Corporation's quotations to you on structural material during that time?

A. I should say they would have averaged one forty to one forty-five. We had a small contract with them at one thirty-five, Pittsburgh.

Q. How much did you have to pay during this time to get prompt deliveries on your material?

A. We paid at times as high as one fifty and one sixty, Pittsburgh.

MR. DICKINSON: What year are you speaking of?

THE WITNESS: 1912.

By MR. REED:

Q. Have you any objection to stating the manufacturer to whom you paid that price?

A. Not at all.

Q. Who was it?

A. Phoenix. We paid Ryerson a premium to get stuff through from the Eastern Steel Company.

Q. While you were paying one fifty-five and one sixty, what prices was the Iron Age quoting on such material?

MR. DICKINSON: At Pittsburgh?

MR. REED: Pittsburgh.

THE WITNESS: To the best of my recollection, about one forty-five.

By MR. REED:

Q. Those Iron Age quotations were also on the Pittsburgh base, I assume?

A. Oh, yes.

Q. How have you found the Steel Corporation sharing in your business? About what percentage of your orders?

A. I should say about ten per cent.

Q. And over what period has that been so?

A. Oh, the last two or three years.

Q. The Steel Corporation has been getting about ten per cent. of your business?

A. About ten per cent.

Q. Why have they not got more?

A. Because we could not get the deliveries.

Q. Did they refuse to enter your orders out of turn in preference to other customers?

A. That was their plain statement to us; that they could not show us any preference, and we would simply have to wait for our turn.

Q. I neglected to ask you, Mr. Shafer, when you testified that these quotations had been variant, how long that had been so, whether that goes back over all of your experience since 1909?

A. Yes, sir.

Q. Conditions have been the same all along?

A. Just about.

Q. Has there or has there not been, during that period, an aggressive competition for your business among these manufacturers?

MR. DICKINSON: This is objected to as indefinite, vague and incompetent.

THE WITNESS: I should say yes.

By MR. REED:

Q. They have sent salesmen to see you?

A. Always.

Q. And those salesmen have been persistent and aggressive?

A. Yes.

CROSS EXAMINATION

By MR. DICKINSON:

Q. Mr. Shafer, you have been speaking, as I understand you, not as of a period prior to 1909?

A. No, sir.

Q. Take 1909: What were your duties with your company?

A. I made the contracts for material; I had charge of the sales for the business, and looked after general affairs, financial affairs, etc.

Q. What was the extent of your purchases in structural material—it is unfabricated, is it?

A. Plain material, yes.

Q. Per annum.

A. In 1909, I should say we did a business of about 10,000 tons.

In 1912 we did a business of at least 20,000 tons. In fact, we bought more than that; we bought about 26,000 tons last year, but some of that was fabricated outside.

Q. Where do you market your stuff?

A. Mostly in the metropolitan district.

Q. In 1909, have you any definite recollection as to the prices on any particular contracts which were made at that time for the purchase of structural material?

A. I do not recall the exact prices, no.

Q. In 1909 how many contracts did you give out for structural material?

A. I cannot answer that, because that would depend largely on the number of jobs that we had that year. We contracted for very little material by blanket contract. It was mostly according to which particular job we took.

Q. Sometimes you would be in quite a hurry for those deliveries, would you?

A. Yes, sir.

Q. How many jobs did you perform in 1909? Do you know?

A. I should say 25 or 35.

Q. So you had, then, at least from 25 to 35 different transactions in purchasing structural material?

A. Yes, sir.

Q. Do you know, now, and can you state for the year 1909, from whom you purchased, of the makers, the structural material for these various jobs? I mean the particular ones.

A. Yes. We purchased from the Bethlehem Steel Company the major portion of our steel; we also purchased some material from the Phoenix Iron Company.

Q. When you purchased from the Bethlehem Company in 1909 the major portion of your steel, did you use the angles that they specially make?

A. We used practically all sections.

Q. Beams, I mean; did you use the beams?

A. Special beams?

Q. Yes.

A. Yes, sir.

Q. Were those specially adapted for your work?

A. Yes; just as much as the standard shapes. There was a slight economy, as we figured.

Q. You found it more profitable to use them, did you?

A. Yes, sir.

Q. Did you take bids from anybody else on that character of beam?

A. No one else fabricates that particular beam.

Q. Except the Bethlehem Company?

A. Except the Bethlehem Company.

Q. On each contract for the year 1909 under which you bought from the Bethlehem, did you take bids or did you, knowing their prices and the character of their work and your own needs, buy from them frequently, from time to time, as you needed it, without taking bids?

A. No, sir; we took bids from the representatives of the various companies, both the standard mills as well as Bethlehem, and compared the prices. Let me add, further, that about 50 per cent. of the steel that we use in our contracts is standard material.

Q. I am speaking now not generally, but of the year 1909, and of your recollection of the contracts under which purchases were made in that year. I want you to confine your answers to that and not to any general knowledge of your business.

A. All right.

Q. Now, as to that year, then, 1909, do you carry in your mind the particular transactions in which you bought from

the Bethlehem, and whether or not in respect to those particular purchases you took bids, and if so enumerate what they were and from whom you took bids as to those particular purchases?

A. We took bids from the Bethelehem and from the Phoenix and from the Carnegie, and at that time I believe we bought from the Bethlehem at about as low a price as we could buy anywhere else. We bought at a price which was lower finally than their first quotation.

Q. Lower than their first quotation?

A. Yes.

Q. That is to say, you got quotations and then afterwards you bargained for a lower figure and got it?

A. Yes.

Q. Did you always do that?

A. Practically always.

Q. Is it not a fact that those first quotations from various makers for standard structural shapes during 1909 were frequently the same?

A. I do not recollect that that is so.

Q. You do not know that that is so; you have no recollection about it one way or the other?

A. My recollection is that the prices varied.

Q. Well, now, do you know of such a term as an open market in the steel products?

A. I have heard of such a term.

Q. Did you hear such a term used in connection with 1909 or any part of 1909?

A. I cannot recollect that.

Q. Now, Mr. Shafer, don't you know, as a matter of fact, that in 1909 there was much sharper competition than there had been before that, and that for a long period the market was characterized and generally known by people in your line of business as an open market?

A. Yes, I would say that.

Q. When did that begin in 1909?

A. I do not remember whether that was in the fall or not. It strikes me that that was about in the late spring, but I cannot recall that.

A. Yes. We purchased from the Bethlehem Steel Company the major portion of our steel; we also purchased some material from the Phoenix Iron Company.

Q. When you purchased from the Bethlehem Company in 1909 the major portion of your steel, did you use the angles that they specially make?

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the Bethlehem, and whether or not in respect to those particular purchases you took bids, and if so enumerate what they were and from whom you took bids as to those particular purchases?

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A. I have heard of such a term.

Q. Did you hear such a term used in connection with 1909 or any part of 1909?

A. I cannot recollect that.

Q. Now, Mr. Shafer, don't you know, as a matter of fact, that in 1909 there was much sharper competition than there had been before that, and that for a long period the market was characterized and generally known by people in your line of business as an open market?

A. Yes, I would say that.

Q. When did that begin in 1909?

A. I do not remember whether that was in the fall or not. It strikes me that that was about in the late spring, but I cannot recall that.

Q. Well, the competition get very sharp did it not, in April, 1909?

A. I believe so.

Q. How long did it continue?

A. Practically all that year.

Q. And that year was known, was it not, as a year of open market?

A. Whatever you call it.

Q. I do not call it anything. I want to know what you call it, and what you know as a man in that line of business.

MR. REED: We will be more likely to know if you do not break off the answer. I think you interrupted him without meaning to.

MR. DICKINSON: Do you want to say more than you have said?

THE WITNESS: I said I would not call it that.

By MR. DICKINSON:

Q. Is there not such a term in respect of the iron and steel business that is used, among those in that business, as an open market?

A. Well, I have heard that term used, but I do not know just what you mean by "open market."

Q. It doesn't make any difference what I mean by it, but I would like to know what you understood by it when you heard it used?

A. I have usually understood an open market to be a market when competition was pretty keen, and you could buy your steel at varying prices, considerably varying prices.

Q. And that was contrasted with a steadier market, was it not?

A. Yes.

Q. Now, during the periods of that steady market, the converse of that would be true, would it not, that generally the prices ruled constantly for long periods of time about the same?

A. About the same.

Q. There were times, however, that by special bargaining

you could get a variation from some special manufacturer even from those prices?

A. Yes.

Q. And that frequently depended upon the question of time of delivery, did it not?

A. Yes.

Q. And sometimes even for quick delivery you would give more in the way of a premium?

A. Yes.

Q. You spoke of Iron Age prices. Did not the Iron Age, in addition to its quotation of standard prices, also quote premiums from time to time that were being paid for delivery?

A. They made mention of it in comments on prices in different locations.

Q. Now, was there not another break in 1911 somewhat similar to the one which you have described as having taken place in 1909?

A. Yes.

Q. How long did that continue?

A. I should say about six months.

Q. Well, during that time was the competition sharper than it had been before this change set in?

A. I should say so.

Q. And the prices more variant?

A. Yes.

REDIRECT EXAMINATION.

By Mr. Reed:

Q. Mr. Shafer, competition is always sharper when business is bad?

A. Certainly.

Q. When business is very good, competition is among the buyers rather than among the sellers?

A. Yes.

Q. And that is the same in the steel market as in others?

A. Absolutely.

Q. In this steady market that you spoke of, what was the condition of business at that time?

A. Why, all the shops were pretty well filled and the competition was not so keen.

Mr. Dickinson: What year was that?

Mr. Reed: In these periods that you called steadier, no year mentioned.

By Mr. Reed:

Q. In these periods that were called periods of steady market, the mills were pretty well filled up, were they?

A. Yes.

Q. Then, when the mills were no longer well filled up, you had these unsettled periods when prices broke more sharply?

A. Yes.

Q. Whenever the mills were not full of business they went out and got it by cutting prices?

A. Yes.

Q. And that is what you meant when you said the variations were greater in these open market periods than steady market periods?

A. Exactly.

Q. In these steady markets, Mr. Shafer, were quotations variant also?

A. Yes.

Q. I mean the quotations in response to particular inquiries, these quotations of different manufacturers coming in at the same time?

A. Yes.

Q. They were variant, were they?

A. They were.

Q. 1909 was the first year, you say, that you bought plain material?

A. In any quantity; we have always bought more or less since we started business in 1905, these small lots.

Q. So far as you can observe, have these same conditions that you have testified to existed since 1905 as well?

A. I am really not competent to pass on that, because I did not start buying until 1909 in any quantity.

Q. So that your testimony is limited to the period since 1909, when you became vice-president?

A. Yes.

RE-CROSS EXAMINATION

By Mr. Dickinson:

Q. Wasn't 1909 a good year for business?

A. We did not consider it so.

Q. Was not the output of manufacturers large in that year as compared with other years?

A. What manufacturers, may I ask, do you refer to?

Q. The manufacturers of things that I have been speaking about, structural steel.

A. The output was fairly large.

Q. But still there was a break in prices, was there not?

A. Yes.

Q. Don't you know that that break came on account of one of the manufacturers coming in and selling the market as against the others, and that this led to the open market?

A. I do not know that.

Q. You do not know anything about that?

A. I have heard—I believe it was the Republic Iron & Steel that had commenced to cut prices, and that the others followed suit, but I have no direct knowledge.

Q. But wasn't it a matter of general talk that the Republic Steel cut the prevailing prices and that on account of that cut the others went in and cut prices also?

A. I read that in the paper; that is all I know of it.

Q. Now, was 1911 a good year so far as output was concerned in structural material?

A. As far as the tonnage fabricated was concerned, yes.

Q. Still there was a break in that year also, wasn't there?

A. Prices varied a good deal in that year.

Q. But wasn't there a distinct break, and wasn't the market for some time during that year characterized by much sharper competition than had prevailed before or than prevailed afterwards?

A. I would hardly say so. I would like to add this: that the competition in this local market, in spite of the fact that there was a good deal of business to be had, has been and was exceedingly severe, both in 1909 and 1911; in fact, ever since 1909. That is due to the fact—if I may digress a

little bit—due to the character of the buildings that have been put up during those periods. The speculative builders have been largely in the forefront in building, and the speculative builders have been responsible for low prices and very keen competition among the local fabricators; there has not been any too much business to keep capacity busy in this local market, and the prices naturally that were sold at, being very close, we have had to pound pretty hard to get our prices from the mill.

Q. You are speaking there of the competition among the fabricators?

A. Yes.

Q. I have been only speaking to you in regard to the prices from the mills. Coming now to 1911, I want to ask you whether or not there was not a distinct break in the market as contrasted with the general prices that had prevailed among manufacturers before that time, and if this did not continue for quite a period, of some months?

A. That was during the fore part of the year when business was slack, very slack. The business commenced to pick up in the fall and prices commenced to stiffen.

Q. Yes, but what I want to get at, Mr. Shafer, is if this was not something different from the ordinary variation in prices.

A. I would not say so, no.

Q. Don't you know that there was a break in the market and that the market was then known as an open market?

A. I know that there was a break in the market, but there was a perfectly logical reason.

Q. I am not asking you for the reason. I am asking you for the fact: if there was not a break in the market, and if the market thereafter, so far as competition was concerned, was not very much sharper, as contrasted with what had existed for quite a long period before the break?

A. There was very keen competition.

Q. Wasn't that competition keen as contrasted with the competition that existed before that break came among the sellers of structural material?

A. I would not say that competition was so excessively

keener in those periods than before. If I understand what you are trying to get at, you want to know if there was a sharp contrast in that particular period over the preceding period where there had been steady prices. The competition for our business has always been very keen and we did buy at better prices in 1911 than we had preceding.

Q. Were not, before this break came in 1911, the prices for a long period anterior to that time characterized by a much steadier market than that which prevailed after the break came?

A. Not for such a very long period, no.

Q. Do you know what the prices were in standard structural material before that break came, the quoted market prices?

A. I can not recollect exactly the prices. They ran from about $1.30 to $1.50 Pittsburgh, and after the break, when the severe break came, we bought as low as $1.10.

Q. Now, were not market prices quoted more constant for months preceding that break than were the prices quoted during the months of the continuance of that open market?

A. Possibly so.

Q. Well, I am not asking what is possible. I am asking you what you know about it.

A. I know there was always a variation of price, a fluctuation of price. When there was a good business we usually figured on a pretty steady price for material, but when this break came there was a perfectly logical reason for the break, and it was occasioned by the supply and demand, the condition of the mills.

Q. Take 1909: That break you said came on account of the Republic Steel, as you understood?

A. I did not say so.

Q. What did you say about the Republic Iron & Steel?

A. I say I simply read in the paper that the Republic Iron & Steel had gone out to get business and had cut prices.

Q. Don't you know that coincident with and following that others went out to get the business and that there was an open market for a period after that?

A. Prices came down.

Q. Your recollection is that this break in 1909 occurred on account of the Republic Iron & Steel going into the market for business?

A. I do not recall that it was the Republic; I do not recall the date, but they started to slash prices.

Q. You did say you remembered reading in the paper or getting some information about their slashing prices. When was that?

A. My recollection is that was 1909, I may be misinformed as to that.

Q. It might have been some other year, might it?

A. Yes.

Q. It might have been 1910?

A. It might have been; I do not recall.

Q. It might have been 1911?

A. It might have been.

Q. Wasn't the volume of business in structural steel very much larger in 1909 than it was in 1908?

A. I cannot say because I was not in the fabricating business in 1908.

Q. Do you know what occasioned the break in 1909?

A. No, sir.

Q. From whom have you bought in 1913?

A. From Bethlehem Steel Company, from the Carnegie Steel Company, and from Phoenix.

Q. How much have you bought up to this time in 1913?

A. I should say about 12,000 tons.

Q. What proportion of that have you bought from Carnegie?

A. Not over ten per cent.

Q. What proportion from Bethlehem?

A. I should say about 60 to 70 per cent.

Q. And the balance from Phoenix?

A. Well, no, that would be distributed among Phoenix and Lukens and Ryerson.

Q. That would be, then, from 20 to 30 per cent. distributed among others?

A. Yes, sir.

Q. Now, take the year 1912, from whom did you make your purchases?

A. About the same people.

Q. Do you know the percentages in 1912, the way you distributed your percentages between these various makers?

A. Approximately the same.

Q. Approximately the same?

A. Yes, sir.

Q. How about 1911?

A. Very much the same way.

Q. And how about 1910?

A. Probably our percentage with Bethlehem was a little larger.

Q. 1909?

A. The same in 1909.

Q. So the percentage has remained about the same notwithstanding the competition?

A. About, yes.

Q. Now you state that the United States Steel Corporation at a certain period would not fill orders because they were full up; what time did you refer to?

A. Last year particularly.

Q. Last year?

A. Yes, sir.

Q. 1912?

A. Yes, sir.

Q. That is to say, that before you made application to them, why, their books were so full that they could not entertain your order?

A. For prompt deliveries.

Q. For prompt deliveries?

A. Yes, sir.

Q. The deliveries within the time that you wanted them?

A. Exactly.

Q. Then you got no bid from them at all for that year?

A. We got the bid.

Q. No, but the bid was not to deliver within the time that you wanted it?

A. No, it was not.

Q. And the other bids involved not merely the question of price, but also the question of time?

A. Yes, sir.

Q. And it was on that that you awarded it?

A. Yes, sir.

MR. DICKINSON: That is all.

MR. REED: That is all, Mr. Shafer.

(Whereupon a recess was taken until 2 o'clock p. m.)

AFTER RECESS

ADOLPH W. VOGT

was called as a witness on behalf of the defendants, and being first duly sworn, testified as follows:

DIRECT EXAMINATION

By MR. REED:

Q. You live in New York?

A. I live in Montclair, New Jersey.

Q. And you are employed in the accounting department of the Steel Corporation?

A. Yes.

Q. In what capacity?

A. I am chief statistician in charge of costs and related statistics, all under the jurisdiction of the comptroller's office.

Q. Did you occupy the same position in September, 1907?

A. Yes, I did.

(Here a paper was marked "Defendants' Exhibit No. 117")

Q. I show you Defendants' Exhibit No. 117 and ask you what that is.

A. That is an exhibit which shows the mill cost of producing pig iron at all blast furnaces of the subsidiary companies of the United States Steel Corporation in the month of September, 1907.

Q. Did you compile this statement personally?

A. Yes, I did.

Q. From what original documents?

A. The data comprised in that statement were compiled from original cost sheet records that came to us in the normal course of business during that period.

Q. How many furnaces did the Corporation operate at that time, September, 1907?

A. Well, they probably had about 90 furnaces operating on pig iron, spiegel and ferro-manganese. Of course this statement limits itself to pig iron alone.

Q. About how many furnaces were there on pig iron alone?

A. About 85.

Q. Did those furnaces make separate reports to you?

A. Yes, they did.

Q. And this Exhibit 117 is compiled by you from those 85 reports, is it?

A. Yes, it is.

MR. REED: You may cross examine, Judge.

CROSS EXAMINATION

By MR. DICKINSON:

Q. You testified as to Defendant's Exhibit 117, and that shows the mill cost of producing pig iron at all blast furnaces of the subsidiary companies for the month of September, 1907. State what you include in the column "Cost per ton" as mill costs. I just want to know what items that embraces.

A. Of course that includes the cost from the raw material in the ground up to and including the cost of assembling and converting the same into pig iron. The term "mill" there was used intentionally. It is a term that we commonly make use of in the Corporation to designate that the cost is not the final or ultimate cost including overhead charges.

Q. Does it include everything but overhead charges?

A. Yes, sir.

Q. In that case, as set out here, what do you include, say, for the Carnegie Steel Company as the value of the ore?

A. The costs given in this statement are, in the case of all of the companies given, the integration net cost: that is, the

cost to the Corporation exclusive of integration net profits. Is that clear?

Q. It may be to you, but it is not just on the line that I am asking you.

For instance, take the Carnegie, 11.116 cost per ton; in that case do you make any allowance for the value of the ore or the royalty upon ore, or the cost to the company of the ore?

A. Yes; that is the exact cost of the ore. It includes royalty, of course, and depreciation on the ore.

MR. REED: And mining cost and transportation?

THE WITNESS: Certainly; mining and transportation; all costs of assembling that ore at the Carnegie Steel Company's plant.

Q. But in it there is a certain part of it that represents the value of the ore itself?

A. That may be royalty or depreciation. Is that what you mean?

Q. Suppose you mined ore from lands that were owned in fee, and mined some from lands upon which a royalty was paid. Do you make any difference in the allowance between the two?

A. It would include the general depreciation and amortization, if you call it that. Of course there is a difference there in the cost of mining. In the one case your depreciation takes care of it and in the other case your royalty takes care of it.

Q. I am not speaking of depreciation in the cost of mining, but what I want to know is: In this item I have referred you to, what amount, if any, was assigned to the value of the ore as contradistinguished from the cost of getting it out and transporting it and of converting it?

A. I could not tell you that.

Q. But that is in the estimate somewhere or other, is it not?

A. Yes; I think it is.

Q. But you do not know whether it is or whether it is not?

A. I could not tell you what it is, what it amounts to; no, sir.

Q. Do you know whether it is the same as to the Carnegie

Company, the Illinois Steel Company and the Steel & Wire and National Tube, or whether it varies?

A. It would be the same.

Q. It would be the same?

A. Exactly.

Q. No matter where the ore came from?

A. Well, it would be the same as to the same kind of ore; that is, ore coming from the same mine. It would be the same to either one of these companies.

Q. Some of your ores came from the Mesabi, did they not?

A. Yes.

Q. Some came from the Vermillion?

A. Yes.

Q. And some came from Michigan?

A. Yes.

Q. And some was Bessemer ore, was it not?

A. Yes.

Q. And some was non-Bessemer?

A. Yes.

Q. Some came from mines owned in fee?

A. Yes.

Q. And some came from mines upon which you paid a royalty?

A. Yes, sir.

Q. What I want to get at is: What is the amount in each of these estimates for these various companies which was allowed for the value of the ore?

A. I could not say that, Judge. I would have to refer to a mass of figures and calculations, which might determine it or might not. I could not answer offhand.

Q. There would be some valuation, would there not?

A. I should say there would be. There would be through the bond sinking funds, I take it.

Q. This does not represent merely the cost of transportation and conversion, but it also represents the value of the ore that went into the iron, does it not?

A. Yes, sir; it does.

Q. You have heard of the Rouchleau mine?

A. I suppose I have.

Q. You cannot say, now, whether you have or not?

A. No.

Q. Do you know what they paid per ton for that ore?

A. No, sir; I do not.

Q. Do you know, if ore entering into any of these sums came from that mine, whether that was valued upon a different basis?

A. I could not tell you that, sir. I do not know.

Q. All of these ores came from the Oliver Mining Company, did they not?

A. I suppose practically all of them. Whether or not some of them came from outside mines I could not say, except by reference to the detailed records.

Q. Do you know the cost to the Oliver Mining Company of furnishing any of these ores which entered into these figures?

A. That is a pretty hard answer to make, because this ore that is used at furnaces is in a great many cases grouped, and its identity as to the mine from which it came is somewhat lost. In some cases you could tell and in other cases you could not.

Q. But I am asking if you, in speaking of these figures, of their correctness, can tell how far they represent the cost to the Oliver Mining Company of the several kinds of ore that were supplied by that company to produce this iron?

A. You could not, of course, trace back an ore that stands on the books of a manufacturing company at a certain price, which includes the cost of mining, the cost of transportation upper lakes, lake and lower lake transportation, unloading and handling—you could hardly tell how much of that total book inventory cost is identified in or applicable back to the mining cost sheet itself.

Q. Well, now, do you know whether this represents merely the cost to the Oliver Mining Company, or whether it represents any profits of that company?

A. It represents no profit to the mining company.

Q. To the mining company?

A. That is right.

Q. You cannot say what it represents in the way of costs to the various properties, distinguishing those owned in fee from those leased?

A. No, sir; I could not give you that in detail.

Q. Do you know what valuation was put upon any of these ores for amortization purposes? I mean as to whether or not that entered into these figures?

A. I do not, sir.

Q. Do you know whether, when furnishing this ore, the Oliver Mining Company was credited with the original cost of the ore merely, or upon some valuation as of the time that it was furnished?

A. Why, the Oliver Iron Mining Company, of course, sells its ore on a commercial basis to these steel companies.

Q. Each one of these subsidiaries?

A. Yes.

Q. What do you mean by "commercial basis?"

A. At a price that includes some profit, no doubt, to the mining company.

Q. But you cannot say what that is?

A. I could not say individually what that is; no, sir.

Q. This does include some profit over and above mining and cost of material?

A. No, sir; that is exclusive of the mining and transportation profit.

Q. Do you know to what extent it is exclusive of it?

A. Well, in a general way, yes; that is, in a lump sum I suppose you could tell.

Q. What do you mean by "amortization charge?" How does that affect these figures?

A. Well, when I said "amortization charge" I had particularly in mind royalty. I took it that upon the ores which we own in fee there is, of course, in our mining cost a charge for depreciation upon the investment, shafts and stripping investments, but I do not think we have got in there an amortization on the cost of the ore remaining in the ground itself.

Q. Well, now, you say there is depreciation on account of shafts; is there any appreciation on account of the value of the ore?

A. No, sir.

Q. Well, then, do you mean to say by that that these ores, in reaching these figures, are reckoned upon the basis of the cost of the several ores that were furnished by the Oliver Iron Mining Company to these several companies here?

A. Yes.

Q. The original cost?

A. Yes.

Q. Now, do you know that to be a fact?

A. Pardon me. Do you mean the original cost of mining?

Q. No, I do not mean the cost of mining; I mean the cost of the fee ores or the royalty upon the ores under lease.

A. I was mistaken in my idea of what you meant. I thought you had reference to the cost of the mining operation itself. I see now that you were referring to the cost of the ore in the ground.

Q. Yes. Now answer the question that way.

A. May I have the question repeated?

(The original question was repeated by the stenographer as follows:)

"Q. Well, then, do you mean to say by that that these ores, in reaching these figures, are reckoned upon the basis of the cost of the several ores that were furnished by the Oliver Iron Mining Company to these several companies here?"

By Mr. Dickinson:

Q. I will put that this way: Well, then, do you mean to say that these ores, in reaching these figures, are reckoned upon the basis of the original cost of the ores purchased in fee, or the royalty on the ores under lease?

A. It is my opinion that in the cost of the ore, as we charge it into these figures here, there is no charge for amortization on the ore which we own in fee. I believe that answers your question, does it not?

Q. It answers it, but I do not know that I fully understand the answer, by reason of my lack of familiarity with the sub-

ject. Do you mean to say by that that where ores were furnished from lands which were owned in fee, the cost, so far as the value of the ore was concerned, simply represented the original cost?

A. No; the original cost of the ore in the ground in that case is not included.

Q. Then what value would be given to such ore?

A. Well, the value in that case would probably not be included in here.

Q. I am not asking what is probable; I am asking just what you know about these figures.

MR. REED: Do you know whether it is or not?

THE WITNESS: I am not positive in every case, Mr. Reed. I have an idea it is not included.

MR. REED: Could you find out?

THE WITNESS: Yes, I could, of course.

MR. REED: Is not that better, Judge, than having him guess at the probabilities?

MR. DICKINSON: I do not know; it suits me just as well.

By MR. DICKINSON:

Q. Take the question of royalty. Now, where royalty was paid by the Oliver Iron Mining Company upon any of the ores which went in to produce these results, was that royalty charged in as a part of this cost?

A. Yes, it was.

Q. At the original royalty?

A. Whatever the royalty charge is.

Q. No matter when the lease was made?

A. Yes, that is right.

Q. Without any allowance for any increase in the value of the ores?

A. That is right.

Q. Would that be the same in regard to lands owned in fee?

A. I couldn't say that.

Q. Do you know how much of this was from land owned in fee and how much from land upon which royalty was paid?

A. Not offhand, I could not say.

Q. Now, the cost of transportation: What was charged in this from the mines to upper Lake ports?

A. The actual cost of transportation over our own railroad was charged in this from the mines to upper Lake ports, where the ore went over our own roads.

Q. That is, what it cost the railroad to carry it?

A. What it was estimated it cost the railroad to carry such ore.

Q. And it has no reference to the rates?

A. No, it has no reference to the rates.

Q. What was that estimate; how much was it a ton?

A. I could not tell you that now. It is a matter of calculation at the time. It does not follow, by any means, that ore used in 1907, in September of 1907, was transported or hauled or mined in that month, of course not. It may have been ore that was two, or three or six months old, so that the inventory account in that case represents an average of a great many rates, perhaps.

Q. So you would not know where that ore came from?

A. No; I do not know and could not tell from the books.

Q. And would not know whether it was ore gotten under royalties or ore from fee properties, or whether it was from Michigan or whether it was from Mesabi?

A. In a great many cases you could perhaps tell where the ore came from, except as to certain ores that are grouped. Beyond that you could not.

Q. I am just asking you what you did know at the time you made these figures?

A. These figures were taken from book accounts.

Q. You did not make them?

A. Of course not; no, sir.

Q. They were made by somebody else?

A. These book accounts were made by the companies that are keeping these records.

Q. And you simply tabulated these from those accounts?

A. From the original cost sheet records.

Q. That are sent in by these companies?

A. Yes.

Q. And back of that you did not go?

A. No, sir.

Q. And they sent you the aggregate figures, did they, for certain items?

A. Yes, sir; aggregate figures for certain items.

Q. And what entered into those items, the elements of them, you do not know?

A. No, sir; we had no way from the records we had to tell what is behind that.

Q. That applies to this whole exhibit, doesn't it?

A. That applies only to raw materials, or to any detail that is back of the detail that appears on the report to us.

Q. I mean, as to the way in which this was prepared it applies to the whole exhibit?

A. I do not think so.

Q. What part of it does not it apply to?

A. It applies, as I say, purely to that detail that does not appear on the reports to us.

Q. Take the tons of iron produced. In what shape did that come to you?

A. We get a cost sheet which shows for each blast furnace in the month the tons of iron it produces.

Q. Where did you get this aggregate of tons of iron produced in September by the Carnegie Steel Company?

A. That is a summary of the cost sheet operations of their blast furnaces in that month.

Q. Sent to you?

A. Sent to us.

Q. And the summary was sent you?

A. No, sir; the cost sheets for the individual furnaces were sent to us from which this data is compiled.

Q. Would that apply to the whole column of tons of iron produced?

A. It would.

Q. And the other column applies to the cost per ton?

A. No, sir; the column of cost per ton is got in the same way from the reports from the companies.

Q. But they show aggregates?

A. No, sir; they show detailed costs for the various principal items that go to make up the cost of pig iron.

Q. Do the papers from which you made up this figure of $11.116 show on their face how much of that represented the value of the ore?

A. The figures from which that was determined showed to us how much the ore cost in a ton of pig iron.

MR. REED: How much the ore cost the furnace, in other words?

THE WITNESS: Yes.

By MR. DICKINSON:

Q. In that cost was there included anything for the value of the ore?

A. I have gone over that before. I tried to explain that before.

Q. I know, but it seemed to me I did not understand you. Just answer that question, will you?

A. Well, it includes, of course, the royalty that we pay and the amortization end of it. I said I was not perfectly clear and would have to refer to records.

Q. I am not sure that I understand you. Do you mean to say that the papers which come to you, from which you get these aggregates, showed on their face the royalty that was paid upon the several kinds of ore upon which royalty was paid that went to these various companies for that month?

A. Of course, it does not show that. It shows purely the kind of ore, such as the manufacturing companies would classify in their inventory accounts, that was used in that month at this particular blast furnace; that is all it would show. The cost of ore would be shown in one amount. The details that go to make up that cost of ore, of course, are scattered all the way back, clear to the mining companies, and we could not tell that from this report.

Q. And you did not examine those?

A. No, sir; I could not.

Q. I just want to know the facts. Whether you could or could not is no matter. Now, I have asked you, did the cost, or that element of the cost of ore represent valuation; without going into the thing as fully—I think we now understand.

and you do, what I want to get at on that. What would you say in regard to the cost of coke?

A. The cost of coke includes the mining cost, plus depreciation on investment, plus valuation of the coal in the ground.

Q. You say depreciation on investment?

A. Depreciation on investment which the coke company has in its property.

Q. Well, now, what did that depreciation represent? That is to say, what was it to offset?

A. I do not believe I understand you fully.

Q. Well, what considerations entered into it in reaching the basis of this depreciation? Did it represent exhaustion of mine and deterioration of plant?

A. Yes, both.

Q. How about any increment in the value of the coal from the time it was acquired? Was anything allowed for that?

A. Nothing in there for that, if there is any.

MR. REED: This is stated in a single lump sum for each furnace for the month?

THE WITNESS: Yes, sir.

By MR. DICKINSON:

Q. Now, in making up this, did you go upon the basis of the original cost of the coal to the Frick Coke Company?

A. Yes, sir. I will not modify that. I thought at first I made a mistake in replying, but I think that reply is correct.

Q. In the papers that were submitted to you, upon which you made this estimate of cost for the month of September, is there any showing as to what the cost of the coal was that entered into the making of the coke that was consumed in making this iron?

A. There is not.

Q. You did not have those figures before you at all?

A. No, sir.

Q. Well, in estimating the cost of the coke that went into the cost, in September, of making a ton of iron, how did you get at the value of the coke?

A. Well, the value of the coke or the cost of the coke is

of course entered on this cost sheet from which this data is taken.

Q. And you took those figures?

A. Those figures were of course used as a basing point in figuring or determining the cost of iron at a particular furnace.

Q. That is where you started?

A. That is where every manufacturing company must start.

Q. But I do not mean the company; I do not mean you and the company. I am not making them interchangeable, but I mean you, in making up this summary, in estimating this cost per ton, how did you get at the cost of the coke that went in to make the iron that you here calculate on?

A. Well, the same method there obtained as in the case of ore.

Q. That is what I asked you first, and I thought you said no, and that is the reason I have asked you these questions. How about lime?

A. The same exactly as coke.

Q. Do you say that you know that, in estimating this cost per ton of iron for September, the coke was estimated at the original cost of the coal to the Frick Coke Company?

A. I said that, and that is my understanding.

Q. Did you have any figures before you to show that, or is that just an idea of yours?

A. That is an idea of mine. Of course, I have no figures. I said the cost sheet from which this data was compiled does not indicate that.

Q. Then you do not know that to be a fact yourself?

A. I believe it to be a fact.

Q. Just say why you believe it. I want to know the foundation of your belief.

A. I would have to refer to our original records to determine that for a certainty.

Q. You did not refer to them on that point in making up this?

A. No, sir.

Q. You cannot say, now, how it is?

A. No, sir.

RE-DIRECT EXAMINATION

By Mr. Reed:

Q. Mr. Vogt, are these cost sheets for the individual furnaces made up according to the usual practice in blast furnace cost accounting?

A. Yes; they are.

Q. And in all blast furnace cost accounts there appears a single figure to show ore costs to that furnace for the period under consideration?

A. It may not necessarily be one single figure, but the ore costs for the various kinds of ore or grades of ore used appear in one group.

Q. And the same with the coke costs?

A. And the same with the coke costs.

Q. And the limestone costs?

A. Yes, sir.

Q. These reports came in to you in the regular course of business some time in October, 1907, did they not?

A. Yes; they did.

Q. And were relied on by the officers of the Steel Corporation as expressing the blast furnace costs of these different plants?

A. Yes, sir; they were.

Q. That is all.

A. I might add here that they were prepared from the regular books of account that we have in our mills and in our various companies. These reports are made currently and from year to year.

RE-CROSS EXAMINATION

By Mr. Dickinson:

Q. You did not prepare those?

A. No, sir; of course not.

Q. Were you there when they were prepared?

A. I do not think so. We get a good many thousands of those every month.

Mr. Reed: The defendants offer in evidence Defendants' Exhibit No. 117, being a statement of the costs of producing

pig iron at all blast furnaces of subsidiary companies of the United States Steel Corporation in the month of September, 1907.

MR. DICKINSON: This is excepted to as irrelevant, and also incompetent, because it is based upon figures and statements which were not prepared by the witness, which were prepared by others and submitted to him, and which he has not verified, and the testimony is therefore secondary.

(The paper referred to was thereupon marked "Defendants' Exhibit No. 117 [Vogt], October 22, 1913," and will be found in the volume of exhibits.)

LOUIS HASSINGER

was called as a witness on behalf of the defendants, and being first duly sworn, testified as follows:

DIRECT EXAMINATION

By MR. REED:

Q. Where do you live?

A. I live in Minford Place, the Bronx.

Q. What is your occupation?

A. Manufacturer of boilers and tanks.

Q. What is the name of your company?

A. John Trageser Steam Copper Works.

Q. What office do you hold in that company?

A. President.

Q. How long has that company been in business?

A. Since 1850.

Q. How long have you been connected with the company?

A. Twenty-nine or thirty years.

Q. Are you familiar with its purchases of steel supplies?

A. I am.

Q. How long have you been familiar with them?

A. I have had entire charge of the purchasing since January, 1911.

Q. Were you at any time prior to that familiar with the purchases?

A. Yes, sir.

Q. What was your connection with them?

A. Taking charge of the contracts?

Q. I mean at what time did you first acquire a personal familiarity with the purchases of steel supplies that your concern was making?

A. It must have been about fifteen years ago, I guess.

Q. When did you first become an officer of the company?

A. In 1907, I believe.

Q. What was the office that you had?

A. Secretary.

Q. And during the time that you were secretary, Mr. Hassinger, were you familiar with the conditions under which supplies were purchased, and with the contracts for supplies that were made?

A. In a way, yes.

Q. Were you familiar personally with the quotations that were made to your company for supplies while you were secretary?

A. No.

Q. You did not know about the quotations?

A. I did not know about all the quotations that were made.

Q. Did you know about many of them?

A. Yes, sir.

Q. What kind of steel supplies does your company buy?

A. Sheets and plates.

Q. Has it been buying sheets and plates since 1907?

A. Yes, sir; it has.

Q. What kind of plates does it buy?

A. Tank plates.

MR. DICKINSON: Is that since 1907?

MR. REED: Yes; I am limiting him to the period since he became secretary.

THE WITNESS: Tank plates; that is about 3/16 to a quarter.

Q. You say the thickness of the tank plate you buy is about 3/16?

A. About 3/16.

Q. And the sheets that you buy are thinner than that, I suppose?

A. They run down to 16 gauge.

Q. So that your purchases consist of plates and sheets ranging in thickness from 3/16 of an inch down to a No. 16 gauge?

A. That is right.

Q. From what companies do you buy your supplies of sheets and plates?

A. Shall I name the different companies?

Q. I wish you would.

MR. DICKINSON: Are you asking for any particular year or for the whole time?

MR. REED: At the present time.

THE WITNESS: At the present time the American Sheet & Tin Plate Company; the La Belle Iron Works; Morris Wheeler & Company; Alan Wood Iron & Steel Company and the West Leechburg Iron & Steel Company; most of the purchases are from those concerns at present.

By MR. REED:

Q. Do you buy your plates from some of these companies, too?

A. We do.

Q. From what companies have you been buying sheets and plates since 1907?

A. The Wheeling Steel & Iron Company; John Wood Company, and also those first mentioned, during the same time.

Q. Do you buy your sheets and plates by annual contracts, or do you buy them in lots in the course of a year?

A. Both ways; contracts and separate lots.

Q. Which materials do you buy by contract?

A. Sheets.

Q. Do you buy them on annual contracts?

A. They do not run throughout the year—only four to six months.

Q. You buy your plates in lots as you need them?

A. Some we buy on contract and some we buy in separate lots.

Q. Before letting your contracts, or before placing your orders for separate lots, do you ask quotations from different manufacturers?

A. We do.

Q. Do the quotations that you receive from the manufacturers vary, or are they uniform, at any particular time?

A. They vary at times.

Q. What range of variation will you get in the price per ton?

A. Five to ten per cent.

Q. Do these companies send salesmen to you to see you?

A. They do.

Q. To solicit your business?

A. They do.

Q. Are those salesmen persistent and aggressive?

A. They are.

Q. How long has it been so, Mr. Hassinger, that the quotations you receive in answer to your inquiries have been variant in this way?

A. At least seven to eight years.

Q. So far as you have been able to observe, has the competition between these manufacturers been live and active?

A. I am not so sure about the first part of that term, but I am for the last few years.

Q. You have a better knowledge for the last few years?

A. Yes.

Q. And during the time you have had close personal knowledge of it, it has been active, live competition?

A. Active, live competition.

CROSS EXAMINATION

By Mr. Dickinson:

Q. It has been more lively and active recently than during the earlier part of that period?

A. Yes, it is more so now.

Q. When has been the liveliest part of the competition?

A. Why, I think it is fully a year ago.

Q. You say these quotations varied at times?

A. Yes.

Q. There were times running over periods when they did not vary, were there not?

A. It is generally so; there are times when the prices run pretty near alike; when folks are busy they get higher prices, as a rule.

Q. There were times when you would get substantially the same quotations from a number of these larger makers?

A. Yes.

Q. And that would run over extended periods?

A. While the good business was on, for a few months.

Q. When business was what you call normal?

A. When it was what you call normal, you could get any price you wanted.

Q. What do you call normal?

A. When they could get material inside of 30 days to six weeks.

Q. I do not know that we use "normal" in the same sense. I will state that to you in another way. There are times in business when it runs along steadily without much variation for a time, are there not?

A. No, not for any length of time.

Q. Are there not times when there is sharper competition and keener desire for business than there are at other times?

A. Yes.

Q. Now, what you meant by "normal" was those periods that were not characterized by any special activity above what characterizes an ordinary course of business. In such times as that—do you understand what I mean?

A. Yes, I do.

Q. Were there not periods during that time when these prices from a number of these large manufacturers would be substantially the same?

A. Not during the last few years, while I have had full charge of the purchasing, I have not found it so.

Q. Do you mean to say that at no time since you have had charge of the purchases there were long periods of time, that is to say, several months consecutively, when the prices of the large manufacturers in certain lines would be the same?

A. One might follow the other and try to get as much as

the other, but we could always make purchases in our own way.

Q. You could get some purchases?

A. Yes, we would accept a lower price.

Q. Lower than the market price?

A. Yes.

Q. There was a price generally known as the market price?

A. I believe so.

Q. And by bargaining you might sometimes get some of these to sell at less than the market price?

A. Yes, we always bought at less than the market.

Q. Now, what do your purchases amount to a year in sheet and tin plate, in tonnage? Take the year 1907, when you became secretary.

A. At that time it was about 1,500 to 2,000 tons.

Q. In 1908?

A. About the same average.

Q. And so on down to the present time; about the same?

A. At the present time we are buying more.

Q. Well, say down to 1911, how would it be?

A. It would be about 2,500 tons.

Q. Do you say you buy any tin plate?

A. We do not.

Q. Only sheets and plates?

A. And we buy strip steel.

Q. Now, do you remember about competition in plates in 1909? Do you remember that period, recall it?

A. Not that there was very active competition in plates. At that time we did not use so many plates as we do now.

Q. How about sheets?

A. In 1909?

Q. Yes.

A. Well, I am not competent to testify on 1909, because I did not have full charge of the purchasing.

Q. Then what you have stated has not applied to 1909?

A. Strictly to 1911, and up to the present.

Q. So that what you have said as to prices and competition applied particularly from 1911 up to the present, inclusive?

A. No; I know we have had contracts with the different mills at different prices throughout the last ten or fifteen years.

Q. But I understand that you were not purchasing agent prior to 1907?

A. I was not familiar with all the bids that were made previous to that time.

Q. Then you do not undertake to speak of all the bids that were made, or their comparison prior to 1911?

A. I do not, no.

Q. Well, in 1911, was not there a sharp break in prices?

A. Prices were low.

Q. Wasn't there a sharp break; didn't it come suddenly?

A. I do not remember whether it was exactly 1911, or what part of the year it was, but prices had been very low right up to the end of last year.

Q. What I am trying to get your mind addressed to is this: Was there not a point of time in 1911 where there was a sudden sharp change in prices such as to attract the attention of everybody that was interested in that line of business?

A. It did not affect us very much.

Q. I am not asking whether it affected you. I am asking you whether you knew it happened?

A. I cannot remember exactly that there was a sharp break in price at that time.

Q. Do you remember any break in prices since 1907?

A. Prices fluctuate from time to time; I am not prepared to say just now.

Q. I am not speaking now of any moderate fluctuation from time to time, but I am speaking now—do you recall any period that was so contrasted in the sharpness in change of prices that it was known as an open market as compared with what had existed before that?

A. I know there was more competition among salesmen to get business, but the price did not affect us to any extent. Our contracts covered us for most of the year.

Q. So you were not interested, then, in these changes of price when you made your contracts?

A. Not any more than that we would know that we would get the benefit of the break as soon as it did take place, notwithstanding our contracts.

Q. And your contracts were so that if breaks took place you got the benefit of them?

A. We did get the benefit of it.

Q. Didn't a break take place in 1911 under which you got a very material benefit?

A. Not a very material benefit.

Q. Well, did you get any reduction on account of a break in price in 1911, which came in the market suddenly and sharply as contrasted with the previous business as it had existed for several months prior thereto?

A. We got a low price, our contract simply died out; we got the benefit of the reduction that there was.

Q. In 1911?

A. I do not know what period it was. It was during the early part of 1912 or late in 1911.

Q. You cannot say which?

A. I cannot say definitely just what time it did occur.

Q. Now, for the year 1907, with whom did you have yearly contracts, what companies?

A. I believe it was the Wheeling Steel & Iron Company.

Q. And no other?

A. And also John Wood Manufacturing Company.

Q. And is that all?

A. I think that is all.

Q. From what manufacturers did you buy in 1907 things that were other than those covered by these contracts, other companies, I mean?

A. 1907?

Q. Yes.

A. I cannot remember that.

Q. In 1908 from whom did you buy?

A. The same concerns during that period.

Q. Just name them, will you.

A. Wheeling Steel & Iron Company and John Wood Company.

Q. Did you buy all your requirements from those same companies in 1908?

A. Only part of them.

Q. What other companies?

A. The American Sheet & Tin Plate Company and also La Belle Iron Works.

Q. How much did you buy that year from the American Sheet & Tin Plate Company in tonnage, do you know?

A. About a thousand tons.

Q. A thousand tons of what?

A. Sheets.

Q. How many tons of sheet did you buy altogether that year?

A. Pretty near 2,000 tons, I guess.

Q. Of plates from whom did you buy that year?

A. La Belle and we got some from the American Sheet & Tin Plate Company and Morris Wheeler.

Q. How much did you buy from the American Sheet & Tin Plate Company of sheets?

A. I do not know; it all came under the same contract.

Q. You mean the contract covers——

A. The contract covers sheets and plates.

Q. With whom did you make that contract?

A. The American Sheet & Tin Plate Company. There were certain sizes that run in on the sheet schedule.

Q. And you do not know how much the tonnage of plates was that you got that year?

A. I do not.

Q. Can you approximate it?

A. That was for a line that we only started at that time. We have developed it quite some since, but we were only using a small quantity of plates then.

Q. For that year you had a contract or contracts with them for a certain amount both of your sheets and plates, didn't you?

A. Yes; the contracts covered both.

Q. The contract covered both?

A. Yes, sir.

Q. In soliciting bids for that contract did the solicitation cover both?

A. The gauges ran so we could run them under that contract. They did not specify both tank plates and sheets in the same contracts, but the gauges that we ordered would come in under the same schedule because they were of a certain thickness that would apply.

Q. Do you call them sheets or plates?

A. We do not call them plates; we would call them sheets. They came in under the same contract and in that way sometimes we could get them cheaper than we could by going into the plate market and buying plates.

Q. Whatever you may have called them when you made your specifications and solicited bids under which you made that contract, did you specify in your solicitation just what you wanted?

A. Generally we did; if we applied to a plate mill they would be plates. If we applied to a sheet mill it would be sheets. If any other sizes came in under the sheet contract we would place them there.

Q. I mean in this contract with the American Sheet & Tin Plate Company without respect to what you call them, either sheets or plates, and which was about 1,000 tons, just state the facts as to the solicitation of the bid on that. To whom did you apply for bids?

A. We applied to them for a bid on sheets only and the other concern who made only plates, we would apply to them for a price on plates.

Q. So you tried one for a price on sheets and another for a price on plates?

A. Yes, sir.

Q. Did you specify the sizes?

A. We did, yes.

Q. And did you give the same specifications to all?

A. No, we did not. Some of the sizes would not go under the sheet schedule and we would have to leave them out.

Q. For this contract that you made with the American Sheet & Tin Plate Company for 1,000 tons for that year did

you apply to anyone besides them for a bid on that particular contract?

A. Yes, sir.

Q. Did you, in that application or solicitation, specify just what you wanted?

A. We did not, because we were buying from these same people for years, and they knew what we wanted.

Q. They knew your wants?

A. It was not necessary to tell them exactly what we wanted unless we went to a concern that we had not bought from before, and then we would tell them.

Q. Do you get bids from competitors without specifying what you want them to bid on?

A. Generally.

Q. How would one know what the other was bidding on?

A. We only want certain grades of material, and they knew that was all we would want, and we knew they would figure on the same thing.

Q. And without your specifying what you wanted or the amount of each kind?

A. We specified the amount.

Q. Of each kind of material?

A. The amount of sheets.

Q. Did you write out specifications for that year, covering what was embraced in that contract of 1,000 tons with the American Sheet & Tin Plate Company, and ask bids on that? Do you remember that?

A. I remember we asked for bids. We did not write it out; it was not necessary. The salesmen would call continually, when we were ready to place a new contract, and we would simply tell them.

Q. Do you not mean by that that from time to time, as you wanted to buy, salesmen would drop in and you would get prices from them? Is that what you mean?

A. That is exactly it, yes.

Q. You actually, then, did not send out a written solicitation for bids on any of your articles to these competitive makers, did you?

A. Yes, we did.

Q. In what instance; and state to whom?

A. If we wanted to buy plates from Morris Wheeler, we did not have occasion to buy them so often, and very often their salesman would not be around when we were on the market, and we would write to them for present quotations.

Q. You wanted to buy from them?

A. If we wanted to get their prices.

Q. I want you to give, if you can, any particular instance where you sent proposals to bid for any contract in the year 1908, and to whom you sent written proposals.

A. I would have to look up our records.

Q. You know, as a matter of fact, that you did do that for the year 1908?

A. We certainly did.

Q. To whom in the year 1908 did you send such written proposals?

A. I am sure we sent them to the Morris Wheeler Company.

Q. Are you sure of any one else?

A. We sent them to Worth Brothers. I am not positive.

Q. You do not know whether you did or not?

A. I do not know, no sir; I do not remember.

Q. You are only sure of sending it to one?

A. On plates, yes.

Q. Take the year 1909: What was the tonnage of sheets you bought from the American Sheet & Tin Plate Company?

A. About the same as the previous year.

Q. About 1,000 tons?

A. A little over 1,000; 1,000 to 1,500.

Q. 1,000 to 1,500?

A. Yes; around there.

Q. What was your whole tonnage of sheets used that year?

A. About 2,000 tons.

Q. So you got from one-half to three-quarters that year from the American Sheet & Tin Plate Company of your sheets?

A. About 60 per cent., I guess.

Q. Of plates, how much did you get that year from them?

A. From the American Sheet & Tin Plate Company?

Q. Yes.

A. Not very much.

Q. From whom did you get them that year?

A. Most of them from Morris Wheeler and La Belle.

Q. Were those under contracts or purchases from time to time?

A. La Belle was on contract, and Morris Wheeler was on purchase.

Q. When you made this contract with the La Belle, what time was it and what was the amount of it?

A. It was some time during the year. It might have been 300 tons to 500 tons.

Q. You understand what year I am speaking of?

A. 1909.

Q. It might have been from 300 tons to 500 tons?

A. It might have been that. I am not sure whether it was 300 or 500. Sometimes we would make a contract for 300 tons and sometimes for 500 tons.

Q. In 1909 did you make more than one contract with the La Belle?

A. I believe so.

Q. How many?

A. Probably two.

Q. You said one was from 300 tons to 500 tons. What was the other for?

A. About the same; either one or the other.

Q. So that they were from 600 to 1,000 tons, the two together?

A. That is right.

Q. What was that; what product?

A. The same thing—sheets and plates.

Q. How much of sheets and plates did you buy that year altogether in tonnage?

A. Around 2,000 to 2,500 tons. I am not so sure——

Q. From whom did you buy the other tonnage?

A. If we bought any, it would be from Morris Wheeler or Worth Brothers.

Q. You did not buy any from the American Sheet & Tin Plate Company that year?

A. I am not so sure. We bought very few plates before 1911. Most of it was sheets. If we wanted some plates, we would get them in on one of the contracts, or else send out for a special lot from Morris Wheeler or Worth Brothers.

Q. When you sent for those special lots, you sent to them direct, did you?

A. We would send direct to Worth Brothers or Morris Wheeler.

Q. You would not send out solicitations for bids for those?

A. Those that we had contracts for? No.

Q. You would just apply to them direct to supply your wants at what price was satisfactory to you ?

A. That is it. If the contract was more satisfactory, we would simply place the order there.

Q. What competitive bids did you have on those contracts? Any?

A. Yes, sir.

Q. Just take the year 1909: How many contracts did you have with Morris Wheeler that year?

A. I do not know. It was not very many.

Q. Do you know how much you got from them that year?

A. It probably would not be over two or three carloads.

Q. Do you know what part of the year you got them?

A. No. During the year.

Q. You cannot tell what time in the year?

A. I could not tell, no.

Q. And do you undertake to say that you can remember, as a matter of fact, that at the time that you made those contracts, or just antedating the contracts, and leading up to them, you took bids from other competitors in respect of the subject matter of those contracts?

A. I know we got bids; I know that.

Q. Do you know from whom, for those particular——

A. Just those particular parties I have spoken of.

Q. Did you get bids from anybody else?

A. I do not think so. I did not have all the buying at that

time. I cannot go on record as saying that we got bids from other people, or that we did not.

Q. When did you have all the buying?

A. From January, 1911.

Q. And it is only from that time that you can speak as to a knowledge of all the bids, is it?

A. Yes.

Q. And back of that time you do not undertake to say what the bids were?

A. No; I had charge of the contracts, but I did not have charge of making the contracts or getting the prices; but I was familiar with all the prices that came in and what we contracted for.

Q. You say you were familiar with the prices that came in? That is just what I was asking you about, in 1909?

A. Yes. I cannot tie myself down to a day or a month.

Q. Have you any distinct recollection about it at all as to what these bids were, how they compared?

A. Only that they were variable. There were some higher and some lower.

Q. Did they vary from time to time, or did they vary all the time, and did some of them have the same price or some of them vary? How was that?

A. Some of them had the same price, and some of them varied.

Q. So they did not vary at all times?

A. I would not be prepared to say that.

Q. I mean to say, vary from each other on every specific contract?

A. No; they did not always vary.

Q. Were there not times when the larger manufacturers quoted you the same price?

A. There were, yes. They would try to get it, but we would always make our own terms with either one of them.

Q. That is to say, you found somebody who would sell you differently from the prices that were quoted, did you?

A. Yes. They might make a price and then come down some.

MR. DICKINSON: That is all.

REDIRECT EXAMINATION

By Mr. Reed:

Q. You would find, I suppose, that the worse business was in the steel trade, the keener the competition, would you not?

A. Always. When there was good business, there was no competition.

Q. There was nothing to compete about then?

A. There was nothing to compete about then.

HUGH E. COOPER

was called as a witness on behalf of the defendants, and being first duly sworn, testified as follows:

DIRECT EXAMINATION

By Mr. Reed:

Q. Where do you live?

A. Jersey City.

Q. What is your occupation?

A. I am president of the National Sheet Metal Roofing Company.

Q. How long have you been president of the National Sheet Metal Roofing Company?

A. About twelve years.

Q. Do you give the business your active personal attention?

A. Yes.

Q. What steel supplies does your company use?

A. We use terne roofing plates, tin mill sheets and galvanized sheets.

Q. By tin mill sheets you mean tin plate or black sheets?

A. I mean the black sheets.

Q. And you use galvanized corrugated material?

A. We use galvanized corrugated material and flat material.

Q. From what companies have you been buying your supplies?

A. The American Sheet & Tin Plate Company.

MR. DICKINSON: You mean the whole period of twelve years?

MR. REED: I mean the whole period of twelve years.

THE WITNESS: As near as I can remember, from the American Sheet & Tin Plate Company, the Carnahan Sheet & Tin Plate Company, Philips Sheet & Tin Plate Company, McClure & Company and Follansbee Brothers and N. & G. Taylor at times. Galvanized sheet, from the DeForest Tin Plate and Sheet Company.

MR. DICKINSON: What do you say you buy from the first?

THE WITNESS: Tin sheets, terne sheets.

MR. REED: You do not buy any tin plate?

THE WITNESS: Not any bright tin, only ternes.

By MR. REED:

Q. Black sheets and galvanized sheets, both plain and corrugated; is that correct?

A. Yes.

Q. You gave a list of the companies from whom you buy terne plates. Now, give us a list of the companies from whom you buy black sheets?

A. The American Sheet & Tin Plate Company and Carnahan are the only two of them.

Q. From what companies have you bought your galvanized sheets?

A. From the American Sheet & Tin Plate Company, DeForest Sheet & Tin Plate Company, and I think I have bought some from the Brier Hill.

Q. Have you bought those three products on annual contracts, or have you bought them in lots from time to time as you needed them?

A. Why, during the last three years I have bought terne plates on what you might call annual contracts; the galvanized sheet I have always bought as I required it, and the tin mill or black sheet, I have always bought that as I required it.

Q. Taking up first the galvanized sheets, which you say you have always bought in lots as you required them, without making annual contracts, have you, before you placed your orders for galvanized sheets sought bids from different manufacturers?

A. I have taken prices.

Q. From what companies have you sought prices or quotations?

A. From the American Sheet & Tin Plate Company, the DeForest Company, Brier Hill, and there is another one that occurs to me, that is the McCullough Iron Works.

Q. Have the quotations that have been furnished in response to your inquiries varied, or have they been uniform?

A. Why, there has been a variation. Perhaps from one or two of the concerns I might get the same price, but on the whole there was a variation.

Q. Have those quotations also varied from time to time?

A. Yes.

Q. Have those variances been substantial?

A. Why, at times there has been considerable difference.

Q. In what kind of times have the variances been greatest, in times of prosperity in the steel business, or times of depression?

A. Why, I should say in times of depression.

Q. When steel mills were naturally more anxious to get orders?

A. More anxious for business.

Q. Has that condition been the same for all the twelve years you have been familiar with this business?

A. The variation of prices?

Q. Yes.

A. Yes, sir.

Q. How has it been with black sheets?

A. I have always found a variation.

Q. Has your experience with galvanized sheets been the same?

A. Practically the same.

Q. Coming to terne plates, prior to the time you started

to buy on annual contract was your experience with terne plates the same as with these other products?

A. Yes.

Q. How has it been since you have been letting annual contracts?

A. I have found a variation in price.

Q. You found competition for annual contracts as well as for single lots?

A. Yes.

Q. With what company have you placed your annual contracts during the last three years for terne plates?

A. With the American Sheet & Tin Plate Company.

Q. Each of the three years?

A. Yes.

Q. Why did you place your contract with them?

A. Why, the price was lower and I thought I could be better protected in delivery.

Q. How have the deliveries of the American Sheet & Tin Plate Company been?

A. They have been according to schedule or very close to it.

Q. They have been pretty reliable?

A. Pretty reliable.

Q. And you took that into consideration in letting your contracts, as well as the low price?

A. That was a consideration with me.

Q. So far as you have been able to observe has the competition in those three products that you spoke of during these twelve years been active and live?

A. Why, our business has been solicited at all times. I have bought very little material through salesmen on personal calls, however.

Q. Most of your contracts have been made after inquiries from you for quotations?

A. Yes.

CROSS EXAMINATION

By Mr. Dickinson:

Q. Has there ever been a time since you have been in

business that people who had things to offer for sale did not solicit your business?

A. The American Sheet & Tin Plate Company never came near me for quite a number of years.

Q. I am not asking about any particular one; I ask what is the fact.

A. Well, there was a time that one concern never came near me.

Q. If you will get your mind off this one concern and answer me generally—has there ever been a time since you have been in business when your trade has not been solicited by manufacturers who made the things that you use?

A. Why, some of the manufacturers that made the things I used solicited our trade at all times.

Q. Now you say for the last three years you have been contracting in terne plate with the American Sheet & Tin Plate Company?

A. Yes.

Q. What did you mean by the last three years. Do you include this year in that?

A. This year.

Q. Then go back to the year 1910, from whom did you get your terne plate?

A. From the Carnahan Tin Plate & Sheet Company, N. & G. Taylor Company, and from some of the other concerns that are mentioned.

Q. That year did you buy any of the American Sheet & Tin Plate Company?

A. I did not buy any.

Q. Well, take the year 1909, did you buy any from them?

A. No, sir.

Q. In the year 1908?

A. Nothing.

Q. And the year 1907?

A. Nothing.

Q. Did they solicit your business during those years?

A. No, sir.

Q. Did you apply to them?

A. No, sir.

Q. So you had nothing to do with them, either by solicitation on your part or application from them during those years?

A. Nothing.

Q. Now, you spoke of variations, Mr. Cooper, and these variations extending over a period of twelve years. What do you mean by that term "variation" in the sense in which you use it there?

A. I mean a variation in prices, which would probably amount, from the high price to the low price, to six per cent.

Q. Do you mean to say that throughout that whole period of twelve years there was a variation among all of those who sold to you, or that there were some who varied from prices offered by others?

A. Why, I would probably receive prices that were exactly the same from perhaps two or three of the concerns; from the others there would be a difference.

Q. Now, take in one year, the year 1909. Do you remember those from whom you got bids on terne plate that year?

A. Why, in a general way I would say the Carnahan Tin Plate Company furnished the largest supply of our plates in that year. We also bought some from the Washington Tin Plate & Sheet Company and Taylor, perhaps McClure.

Q. I do not know that you observed my question. Your answer I do not think is relevant to it. I will ask the stenographer to repeat the question.

(The question was repeated by the stenographer as follows:)

"Q. Now, take in one year, the year 1909. Do you remember those from whom you got bids on terne plate that year?"

A. The Carnahan Tin Plate & Sheet Company; N. & G. Taylor Company; Washington Tin Plate & Sheet Company, and McClure.

Q. Were those under contracts, or from time to time as your needs demanded?

A. From time to time.

Q. And you had no long term contracts?

A. No long term contracts.

Q. For that year?

A. No, sir.

Q. Have you, Mr. Cooper, any distinct recollection in regard to that year for any particular supply that you wanted, soliciting bids contemporaneously from these makers that you have named?

A. For no particular supply; no, sir.

Q. And do you carry in your recollection the facts in regard to solicitation and bids that year, and what the respective bids were of those parties?

A. I do not recall.

Q. You would not undertake, would you, to give those figures?

A. No, sir.

Q. Now, take the year 1908. From whom did you buy that year?

A. Why, our purchases——

Q. Terne plate I am asking about now.

A. From the same parties.

Q. From the same parties that you bought from the following year?

A. Yes, sir.

Q. Have you any distinct recollection as to your soliciting bids for any contract or any particular supply that year?

A. I cannot recite any particular instance, but it has always been my principle to write to those concerns for bids.

Q. You were speaking in that way when you spoke of competition, and you do not recall particular instances or particular facts?

A. I am speaking in a general way.

Q. And would you undertake to say that you have any distinct recollection as to the year 1907 or 1908 or 1909, as to bids that were made upon any of those contracts?

A. I cannot recite any particular instance.

Q. How much terne plate did you use in 1907?

A. About 16,000 base boxes, I should say.

Q. And how much would that represent in money, about? I do not mean exactly?

A. Oh, $50,000 to $60,000.

Q. And that year was 1907, was it?

A. 1907.

Q. Take the amount of your black sheets: What was the amount of your purchases that year?

A. I cannot recall that we bought any black sheets in that year. We only bought black sheets when it was to our advantage to work them up.

Q. To what extent have you bought black sheets largely in any of those years?

A. At times I have bought them largely.

Q. In what year did you make your largest purchase?

A. About the year 1912 I should say.

Q. How much in money did you buy that year in black sheets?

A. Perhaps $10,000.

Q. From whom did you buy that that year?

A. They were bought from the American Sheet & Tin Plate Company and the Carnahan Tin Plate & Sheet Company.

Q. In what proportions, as near as you can recollect?

A. To the best of my recollection, about an equal division.

Q. Were they bought at the same time or at different times?

A. At different times.

Q. Did you make more than two purchases that year of black sheets?

A. I am quite sure that I did.

Q. You cannot recall definitely?

A. I cannot recall, but I am quite sure that I did.

Q. Do you recall any particular facts in regard to what was done by you at the time of those purchases, so far as soliciting bids was concerned? Can you carry in your mind, I mean, a recollection of the particular facts?

A. I do not think I took any competitive bids on those two particular lots because we were short of material and we could use black sheets. We had to get them in a hurry and wanted them quick.

Q. How often have you bought black sheets? You say that was the year of your largest purchases, I believe?

A. Yes, sir.

Q. And that you only bought them occasionally as you could work them up to advantage?

A. Yes, sir. I bought black sheets during 1913.

Q. 1912 I believe was the other year, was it not?

A. Yes, sir.

Q. How about 1911?

A. I do not recall the quantity; it was small.

Q. How about 1910?

A. I do not recall that.

Q. How about 1909?

A. I could not state positively.

Q. 1908?

A. I could not recall it.

Q. 1907?

A. I could not recall it.

Q. That was rather incidental, wasn't it, to your business?

A. I think beyond doubt in each one of those years we bought some quantity of black sheets.

Q. But you cannot say whether you did or did not?

A. I cannot say.

Q. Then you cannot state anything in regard to those years in reference to any question of competition so far as black plate was concerned?

A. Only in a general way.

Q. I mean with sufficient accuracy to make a statement?

A. No; I cannot recite a particular instance.

Q. Take galvanized iron; in the year 1907, what is the amount in tonnage of galvanized iron purchased by you?

A. I should say approximately about 300 tons.

Q. And in money value, about what would that be?

A. $15,000 to $18,000.

Q. For the year 1907, Mr. Cooper, from whom did you make those purchases?

A. During the year 1907 my purchases were largely made through a jobbing house.

Q. Through a jobbing house?

A. Yes, at that time.

Q. You mean to say that the jobbing house bid for you?

A. I bought from the jobbing house.

Q. I beg your pardon. You bought from the jobbing house?

A. Yes.

Q. You did not buy from the manfacturers?

A. Not from the manufacturers; very little at that time.

Q. Did you deal with one jobbing house?

A. I dealt with about three.

Q. But I mean in this galvanized iron.

A. No; three.

Q. In the year 1907 you did not deal with any manufacturer in galvanized iron?

A. Not to any extent.

Q. How about 1908?

A. In 1908, why about that time I began buying from the manufacturers.

Q. Early in 1908?

A. I could not tell you that.

Q. What tonnage, in 1908, did you buy?

A. My tonnage ran about the same as for the last five or six years.

Q. Sometime in 1908 you began buying from the manufacturers. Can you say from what period?

A. No.

Q. Whether the early or the latter part of that year you could not say?

A. I could not say.

Q. You have, then, no distinct recollection in regard to your dealings with the manufacturers of that year?

A. I know it was just about that time, five years ago, that I began purchasing from the mills.

Q. But you only speak of that in a general way?

A. I only speak of that in a general way.

Q. You have no details?

A. No.

Q. Or figures of per cent., or other figures in your mind as to that year?

A. No, sir.

Q. In 1909 how much galvanized iron did you buy?

A. I should say it would run the same; about 300 tons.

Q. In 1909 did you make your purchases through the brokers or manufacturers, or both?

A. Both at that time.

Q. Can you tell what proportion you got from brokers and what proportion from manufacturers? In 1909, I mean.

A. I should say about half. I will put that this way: About 60 per cent. from the brokers and jobbers, and perhaps forty per cent. from the mills.

Q. That is a very general recollection, is it?

A. That is a general summary.

Q. You do not undertake to be accurate about that, I suppose?

A. No.

Q. About forty per cent. from the manufacturers for the year 1909. In tonnage what would that 40 per cent. amount to?

A. It would be 120 tons.

Q. And in value about what would that be?

A. About $3,600 to $4,000.

Q. That 40 per cent., amounting to $3,600 to $4,000 for the year 1909. Please state from what manufacturers you got that?

A. To the best of my recollection that largely came from the McCullough Iron Works.

Q. Can you name any others from whom you purchased?

A. I do not recall any others.

Q. That is the only one you bear in mind?

A. Yes.

Q. Have you any distinct recollection in regard to those purchases and what was done so far as the manufacturers were concerned in your making those purchases?

A. As to prices or what?

Q. Yes.

A. Why, I do not recall. I know I must have taken prices from this concern and from these jobbing houses.

Q. But you are only speaking of a general impression?

A. Only of a general impression, yes.

Q. And you have no distinct recollection about that?

A. No, sir.

Q. Let us come down to 1910: What amount of galvanized iron did you buy in that year?

A. I would approximate it at the same amount, about 300 tons.

Q. Did you buy that partly from brokers and partly from manufacturers?

A. Yes.

Q. About what proportion did you buy from manufacturers?

A. I should say about 50 per cent. from manufacturers and about 50 per cent. from brokers.

Q. You have looked at no figures, I suppose, recently?

A. I have not.

Q. To refresh your memory on that?

A. I have not.

Q. And that is a very broad and very general recollection on that subject, is it not?

A. It is a broad statement, yes.

Q. Take that 50 per cent. for the year 1910: From whom did you buy the galvanized iron that year?

A. I bought the galvanized iron in 1910 from the American Sheet & Tin Plate Company and from the McCullough Iron Works, according to my recollection; perhaps from some others. I do not recall.

Q. You may have bought from others besides those two?

A. I may have bought from others.

Q. Your memory is rather vague about that, is it not?

A. About buying from others it is—from other manufacturers. It is not vague about buying from other jobbers.

Q. But you have had no particular reason to bear that in mind since those transactions were passed and closed?

A. No particular reason to impress that upon me, no.

Q. What proportion of this did you buy from the American Sheet & Tin Plate Company and what proportion from the McCullough Works?

A. I should say about 70 per cent. from the American

Sheet & Tin Plate Company, and 30 per cent. from McCullough, representing the purchases from the manufacturers.

Q. Were those on contracts or from time to time as you needed them?

A. That was from time to time.

Q. Did the necessities of your business require you sometimes to supplement your stock quickly?

A. Yes.

Q. On such occasions would you order without getting any bids as to the price?

A. Not in any quantities. In small lots perhaps I would order without taking a price.

Q. You did at times do that?

A. At times. In the case of any quantity I would always take a price from competitors.

Q. Have you any distinct recollection now, and do you carry in your mind any distinct recollection as to the circumstances attending any of these bids for galvanized iron during that year, or are you only speaking in a general way?

A. I have a distinct recollection in the latter part of 1910 of taking bids on galvanized sheets.

Q. What quantity did that cover?

A. I think it was about 80 tons.

Q. And in money value how much?

A. From 80 to 100 tons. Somewhere around $6,000.

Q. And you have a distinct recollection as to that particular transaction?

A. As to that particular transaction.

Q. Who got that order?

A. The American Sheet & Tin Plate Company.

Q. They got all of it?

A. Yes, sir. They got all of it.

Q. Within what time was it to be supplied?

A. It was in one shipment, sir.

Q. Do you recall whom you solicited to make bids on that particular order?

A. The only manufacturer I recall at the present time is the American Sheet & Tin Plate Company. I also took prices from jobbers and brokers on it.

Q. But that is the only manufacturer you can recall now?

A. That is the only manufacturer.

Q. Now, during the years 1908 and 1909, do you know whether the manufacturers making the different articles that you have referred to were running at their full capacity or not?

A. I cannot tell; I have no definite knowledge of that.

Q. You do not know anything as to their supply in those years?

A. I have a faint recollection that in 1909 I could get material without much delay.

Q. Have you any recollection of why there were variations in prices in 1909?

A. No, I do not recall the prices that prevailed in 1909.

Q. Could you state what was the relative tonnage turned out in the various years of any one of these manufacturers in the articles in which you dealt?

A. No, sir.

Q. Do you know for any of those years what the business of any of the manufacturers was, whether or not it was slack with them or whether or not it was active?

A. Not during those years I do not recall.

Q. Do you recall any of the years in those twelve years that you are speaking of?

A. Why, business during the fore part of 1912 seemed to be slack with them; at least I could get deliveries made very quickly.

Q. That is the only one that you distinctly recall?

A. That is the only one that I recall now.

REDIRECT EXAMINATION

By Mr. Reed:

Q. Have you ever noticed any coincidence between the ability of the mills to make prompt deliveries and their willingness to shade prices in order to get business? Have those two events seemed to occur at about the same time?

A. Only in this one period of depression, in 1912, of which I was speaking.

Q. That is what I mean; how do you know a period of depression in the steel business.

A. I only judge it by the quickness with which delivery was made.

Q. And that is what you meant when you spoke of prices being more variant in periods of depression?

A. Yes.

Q. You stated that prior to 1910, or 1911, I do not remember which, you did not apply to the American Sheet & Tin Plate Company for quotations?

A. No.

Q. Why didn't you?

A. Why, the business had never been solicited, and during that period I did not know whether I could meet the terms of payment that would be imposed by the American Sheet & Tin Plate Company.

Q. In these latter days I suppose you feel able to meet any terms; terms are not a question with you in placing your orders?

A. Terms of payment are not a question at the present time.

Q. Your business has grown since that time?

A. Yes; it has grown.

Q. And prospered?

A. Yes.

(Whereupon an adjournment was taken until to-morrow, Thursday, October 23, 1913, at 10:30 o'clock a. m.)

ONE HUNDRED AND FIRST DAY.

EMPIRE BUILDING,
71 Broadway, New York City,

Thursday, October 23, 1913.

Before Special Examiner JOHN ARTHUR BROWN.

Present on behalf of the United States, MR. DICKINSON and MR. COLTON.

Present on behalf of the defendants, MR. LINDABURY, MR. SEVERANCE, MR. BOLLING and MR. REED.

EDWARD N. CHILSON

was called as a witness on behalf of the defendants, and being first duly sworn, testified as follows:

DIRECT EXAMINATION

By MR. SEVERANCE:

Q. Where do you reside?

A. You wish my residence?

Q. Yes.

A. 416 West 118th Street, New York City.

Q. What is your business, Mr. Chilson?

A. Manager of purchases for the J. G. White Companies.

Q. Will you kindly explain what the J. G. White Companies are; what their business is?

A. There are three companies, comprising J. G. White & Company, Incorporated; J. G. White Engineering Corporation; and the J. G. White Management Corporation. The first named is the parent company of these three, representing our financial interests; the second is an engineering and contracting company, doing a general engineering and contracting business throughout the United States; the third is a management corporation, in charge of public utilities, such as gas companies, electric light companies and street railway companies in this country.

Q. You say one of the companies is an engineering and contracting company. What branch of engineering and contracting does it carry on?

A. It enters almost every field of the engineering and contracting line.

Q. Would you give us some examples?

A. Hydro-electric developments, such as water powers and transmission lines for conducting and transmitting electricity to various sections of the country; steam power plants; irrigation work; street railway construction; paving—do you want more?

Q. That is sufficient to cover it in a general way, I think. How long have you been manager of purchases for these companies?

A. Since July, 1906.

Q. As such manager of purchases, what class of steel products have you had occasion to purchase from time to time?

A. Wire, wire rope, pipe, tubes, structurals—that is, the fabricated structural steel; not so much of the plain unfabricated product; bars, and I think other varied lines handled by the ordinary steel company.

Q. Taking these up not in the same order, but taking them up one at a time——

MR. DICKINSON: Did you say bars in various lines, or bars and various lines?

THE WITNESS: Bars and varied lines.

By MR. SEVERANCE:

Q. Taking up first the matter of tubes and pipe. From whom have you made your purchases of tubes and pipe over this series of years since you became manager of purchases for these companies?

A. Spang, Chalfant & Company; the Youngstown Sheet & Tube Company; the National Tube Company; the La Belle Iron Works; the Republic Iron & Steel Company. That comprises the list, I think.

Q. Have you bought A. M. Byers' pipe and tubes?

A. Byers handles iron. We use very little of it. What we do buy, we buy through some of their jobbing agents.

Q. In making your purchases of tubes and pipe from these various concerns, upon what basis have the purchases been made as to being competitive or otherwise?

A. All of our business is strictly competitive, as far as that is concerned. We usually enter into an arrangement with one or two concerns, for our small run of business. For instance, a gas company requiring, we will say, a thousand feet of a small size of pipe, places an order directly with the manufacturer, without going through our office, under a blanket arrangement that we make which gives them the privilege of purchasing direct at a price that we arrange with the manufacturer. At other times, where large quantities are concerned we send the usual form of inquiry into the market, secure competition and place the business on the merits of the competition, quality, service and price considered.

Q. What has been your experience in purchasing pipe from these various concerns as to whether the prices quoted to you by them were uniform or varying?

A. Well, they all varied, depending upon the kind of pipe you require and the conditions surrounding the inquiry.

Q. Suppose you are buying any particular variety of pipe, do you mean by that that you get varied bids for that pipe?

A. I would not say that in connection with our small or blanket contract business.

Q. I was not speaking of that, but where you ask for bids.

A. Oh, where we ask for bids? We always find quite a difference.

Q. Could you give any examples of any large tonnages of pipe that you have bought at any time where there has been competitive bidding?

A. Well, the last important order we placed for large pipe was in——

Mr. DICKINSON: Just a moment. We object to any period after the filing of the petition in this cause, October 26, 1911. I believe, however, Mr. Severance, that we had an agreement that that would be a continuing objection without being repeated in each instan

MR. SEVERANCE: I do not know. There may have been such an agreement. That may be understood as to all of this testimony at any rate. I do not remember.

MR DICKINSON: Without repeating it will be understood that the objection applies in each case?

MR. SEVERANCE: Yes. You need not repeat it to each question.

By MR. SEVERANCE:

Q. Go ahead, Mr. Chilson.

A. The last important pipe order we placed involving a large tonnage was in December, 1911.

Q. When did you ask tenders on that?

A. Our inquiry was sent on the market the 24th day of November of that year. That purchase involved approximately 22,000,000 pounds of 12¾ inch outside diameter lap welded plain end steel pipe, I think, on an average 31 pounds to the foot.

Q. What was that for?

A. A natural gas line between Bakersfield and Los Angeles, California.

Q. How far is that?

A. Approximately 125 miles.

Q. What competitors figured in that transaction?

A. The bidders were the National Tube Company, the Republic Iron & Steel Company, the Youngstown Sheet & Tube Company, Mark Manufacturing Company, and the Spang, Chalfant Company, besides some foreign competition which we were not in a position to consider, on account of the exceptionally high quotations.

Q. Which company got the business?

A. The National Tube Company.

Q. Was that by reason of their bid being lower than the others, or for what reason?

A. Their bid was the lowest bid received under the competition.

Q. Do you remember any other large contract?

A. That is the only one I have in mind at this time; in

fact, that was the first pipe line contract that we had undertaken.

Q. Now, you say that you make a blanket arrangement with one or more companies at the beginning of the year for the benefit of these various gas companies that you administer. How do you get the prices fixed in that blanket contract?

A. Well, the contract is made for a six months' period, and we either telephone for representatives of these concerns to see us, or send them an inquiry or letter asking for a discount to prevail during the six months period, or to submit a discount, and if it is what we think is fair, we accept it and make an arrangement, either orally or by letter. For instance, with the National Tube Company and the Youngstown Sheet & Tube Company, we have such arrangements now.

Q. Then they are matters of negotiation in each case?

A. Yes; there is not so very much negotiation about it; it is a small business; it is a business that we do not give a great deal of attention to. We are satisfied with the discount when we think it is right, we put it into effect and notify our companies and they draw their requirements under it for a period of six months.

Q. You keep very closely in touch with the markets?

A. I do; I attempt to.

Q. That is your business?

A. Yes.

Q. And the other purchases that you make outside of this blanket arrangement for small amounts, are made by tenders and bids?

A. Yes.

Q. Now, you spoke of purchases of fabricated structural steel; from what different companies have you purchased fabricated structural steel?

A. I will name a few of them: The American Bridge Company; the Lackawanna Bridge Company; Noelke-Richards & Company, Indianapolis. The Noelke-Richards Iron Works, I believe it is called.

Q. Indianapolis, Indiana?

A. Indianapolis, Indiana; Jones & Laughlin; Bethlehem

Steel Company; Belmont Iron Works; L. F. Shoemaker Company and the Converse Bridge Company.

Q. Where are they located?

A. I think they are in Chattanooga, Tennessee. Do you want some more?

Q. Yes, go on.

A. I am taxing my memory.

Q. Have you done any business with the Cambria?

A. The Cambria, and the Virginia Bridge & Iron Company.

Q. Where are they located?

A. Roanoke, Virginia; then there is the Roanoke Bridge Company and the Riverside Bridge Company, I think it is, Martins Ferry, Ohio, I think. That is a fair list of the competition we seek.

Q. Now, in what manner do you make your purchases of fabricated structural steel; is it done by competitive bidding or otherwise?

A. Competitive, strictly competitive.

Q. What is the fact as to whether bids you receive from different manufacturers are uniform or varying?

A. Quite varied.

Q. And you let your contracts on a competitive basis?

A. Always, bearing in mind service, the matter of shipment, and other essential elements that enter into a negotiation of that kind.

Q. And prices?

A. Oh, yes, always.

Q. Now, take wire rope; what concerns have you bought wire rope from?

A. John A. Roebling's Sons Company, American Steel & Wire Company and A. Leschen & Sons Company.

Q. And where are they located?

A. St. Louis headquarters, office here. Hazard Manufacturing Company.

Q. Where are they?

A. Their headquarters are in Wilkes-Barre, Pennsylvania; and Broderick & Bascom.

Q. In what way do you make your contracts for wire rope?

A. We make no contracts.

Q. In what way do you purchase your wire rope?

A. By tender.

Q. That is, each lot by itself?

A. Unless it is a very small order, when we probably will telephone to one or two concerns for a price.

Q. In purchases of any consequence?

A. Any quantity involving any great sum of money, invariably by a tender.

Q. Do these different concerns you have mentioned submit tenders?

A. Yes.

Q. During this period that you have mentioned since you have been manager of purchases for the White Companies, have those tenders been uniform or varying?

A. Varied.

Q. There has been some testimony offered in this case that prior to 1909 there was some kind of pooling arrangment existing between the wire rope manufacturers; do you recall as to whether at that time, the same as since, you received competitive bids on wire rope?

MR. DICKINSON: That is objected to as improper examination, to state to the witness what previous testimony has been in the case, and also as being vague and indefinite; as fixing no time; and because not based on any statement made by the witness with regard to any knowledge of wire rope pools.

MR. SEVERANCE: I will let the question stand, but I will amend it.

By MR. SEVERANCE:

Q. I will ask you, Mr. Chilson, whether this open competitive bidding has been in vogue on wire rope all the time since 1906, when you became the manager of purchases of the J. G. White Companies, or whether that is something recent?

MR. DICKINSON: This is objected to on the ground that the witness has not stated that in respect to wire rope there was competitive bidding, and assumes a fact not testified to.

MR. SEVERANCE: Yes, he did, Judge. You are mistaken. I

know the witness has so stated. If there is any question about it, I will ask him.

By Mr. Severance:

Q. I will ask you whether you made your purchases of wire rope under competitive bidding?

A. Yes, sir.

Q. You had already so stated, had you not?

A. Yes, sir.

Q. Now, I will renew my question as to whether that practice has obtained all the time since you became manager of purchases of J. G. White & Company, or whether there has been any difference in the situation in recent years?

A. I have never known it to be otherwise.

Q. And have the prices quoted you by the various manufacturers been uniform or varied?

A. Varied.

Q. During all that period?

A. To the best of my recollection; yes, sir.

Q. You spoke of purchasing wire; what kinds of wire have you bought, and what quantities?

A. Why, outside of wire rope our wire purchases do not amount to a great deal, except form wire in concrete work, dam work, to build up concrete forms.

Q. Have you during the period you have been manager of purchases of J. G. White & Company been buying that kind of wire?

A. Yes, sir.

Q. And has there been competition in prices on that kind of wire?

A. Yes, sir.

Q. Between the different manufacturers?

A. Yes, sir.

Mr. Dickinson: What do you call that kind of wire?

The Witness: Form wire. It is probably a name not known in the wire trade; it is a name known among contractors. It binds form work in connection with our concrete work. It is a wire similar in size to what telephone wire would be, a No. 8 or No. 9.

By Mr. Severance:

Q. Is it the same kind of wire?

A. I do not know; I am not an expert.

Q. It looks like it?

A. I would say so, from a visual examination.

Q. When you have occasion to buy a quantity of wire in what way do you buy?

A. By tender.

Q. And were the tenders of different manufacturers uniform or varied?

A. Usually varied.

Q. And has that been so ordinarily during the whole period you were manager of purchases of J. G. White & Company?

A. To the best of my recollection.

Q. You spoke of buying bars; from whom have you bought bars?

A. Speaking of steel bars?

Q. Yes, steel bars.

A. Carnegie Steel Company; Jones & Laughlin, and I think it is the Lockhart Iron & Steel Company, that is a Pittsburgh concern, and then a number of jobbing interests that we found throughout the country.

Q. Jobbers representing different mills?

A. I do not know who they represent; they carry stocks.

Q. Of bars?

A. Of bars, or have arrangements whereby they can get quick shipments.

Q. During this period since you have been manager of purchases of J. G. White & Company what has been the situation in the market for steel bars, as to being competitive or otherwise?

A. I have always found it competitive.

Q. Were there a considerable number of companies from whom you have bought this form wire and who made tenders on it?

A. Principally two.

Mr. Severance: You may examine.

CROSS EXAMINATION

By Mr. Dickinson:

Q. Mr. Chilson, you are not speaking of any period prior to July, 1906?

A. No, sir.

Q. Now, in July, 1906, what position did you assume with these White companies?

A. Manager of purchases.

Q. For all the companies which you have named?

A. Yes. Well, those companies were not formed at that time; that is a misstatement. I was thinking of the present organization. At that time they were known as J. G. White & Company, Incorporated, and it was not until a later date that they were segregated and made into three companies.

Q. Then there was one company first?

A. One company at that time.

Q. And subsequently divided?

A. Subsequently divided into three organizations.

Q. When was that division made?

A. That division was made I think January 1st, 1913.

Q. So you had overlooked that very material fact, had you, when you stated that you represented all three of those companies in 1906?

A. I do not know how material it is, but I evidently did overlook it as the testimony shows.

Q. Now, then, in 1906, will you state the quantity of tubes and pipes purchased under your management?

A. I cannot do it.

Q. Can you state from whom you made the purchases?

A. I have no recollection at this time, so far back.

Q. Can you state the percentages upon which these purchases were participated in by various manufacturers?

A. No, sir.

Q. Do you know whether your purchases of tubes and pipes for the year 1906 were altogether from manufacturers——?

A. I could not state it——

Q. Wait a minute until I finish,—or partly from manufacturers and partly from jobbers?

A. Partly from manufacturers and partly from jobbers.

Q. Can you give any approximation——

A. No——

Q. Hold on. Don't be quite so swift.

A. I beg your pardon. I thought you had finished your question.

Q. Can you give any approximation of the percentage of tubes and pipes in the year 1906 which you got from jobbers and the percentage you got from manufacturers?

A. Is the question finished?

Q. Yes.

A. I cannot.

Q. Have you in your mind any distinct recollection as to the transactions in 1906 under which you bought tubes and pipes, and if so, what particulars as to those transactions do you carry in your mind?

A. None whatever.

Q. Do you know the prices that you paid on the several contracts for tube and pipe that you purchased in the year 1906?

A. I do not attempt to carry those things in my mind. It would be impossible for me to retain them.

Q. Do you know what bids any of the jobbers or manufacturers made upon any of the contracts for the year 1906?

A. No, sir.

Q. Do you know what variation, if any, there was in the prices of bids made by jobbers or manufacturers for any of the purchases made in 1906?

A. No, sir.

Q. Suppose I should repeat these same questions and make them apply to 1907 as to tubes and pipes, instead of 1906; would your answers be substantially the same?

A. Substantially the same.

Q. Suppose I should make them apply to the year 1908; would your replies be substantially the same?

A. Yes, sir.

Q. And as to 1909?

A. Yes, sir.

Q. And as to 1910?

A. Yes, sir.

Q. And as to 1911?

A. As to 1911, with the exception of the testimony previously given as to one large contract.

Q. That was one transaction?

A. That was one transaction which I happened to have in mind, having recently looked it up and rehearsed the situation.

Q. That is one which you have recently looked up and rehearsed, and that is the only one that you have in your mind, and the only one in respect to which you carry details as to bids, is it?

A. At this time.

Q. You used something like this expression in regard to purchases of tubes: That in blanket six months contracts you would telephone for their representative to come to you, or would send inquiries asking discounts for a six months period?

A. Yes, sir.

Q. What did you mean by "discount" in that connection?

A. The discount applies to the list prices on various sizes and gauges of tubes; that is, various diameters. That list is standard throughout the country, adopted, I imagine, on the part of the manufacturers as a method of convenience in arriving at values from time to time that they would care to put out. That discount applies against those list prices.

Q. Your understanding was, then, that there was a list price adopted by the manufacturers throughout the country, and that from that as a basis discounts would be made?

A. Competition is on the basis of discount; not on the list price.

Q. But these list prices were sent out by all the manufacturers, substantially?

A. Yes; to the best of my knowledge.

Q. And over considerable periods of time would these list prices be uniform?

A. I have never known them to be otherwise.

Q. Then over long periods of time there were lists where

the prices would be the same on standard tubes and pipes, sent out by the manufacturers, and from this as a basis you would solicit discounts?

A. I do not quite connect your question with the pipe trade business. Our competition is on the basis of discounts that apply to the list prices; these list prices being uniform. They may have been changed—I do not know how often changes have been effected; maybe once every ten years. I think the list was changed January 1st for the first time in ten years. Those were list prices; not the discounts. The discounts were continually fluctuating. The fluctuation comes in the discounts, not in the lists.

Q. But the list prices were uniform for all the manufacturers, were they?

A. I think so; at least in the case of every card I have ever seen.

Q. And certainly it continued during considerable periods of time?

A. Yes.

Q. This uniformity?

A. Yes.

MR. SEVERANCE: Ten years, he said.

The WITNESS: I think the first change in ten years was January 1st.

By MR. DICKINSON:

Q. Now, take up this question of discount: You call up the manufacturers and ask what discount they would give you, or what reduction from that list?

A. We would ask for discounts to apply against the list.

Q. Have you any distinct recollection as to any contract other than the one you have mentioned in respect to which you asked for discounts, and if so state in regard to what transactions, and in what years, and whom you solicited in respect to the particular ones that you have in mind, and what variation there was in their discounts?

A. I cannot go back over a period of years, Judge. It is too long back. I can take the present arrangement. We have an arrangement now with the National Tube Company and one with the Youngstown Sheet & Tube Company for the sup-

plying of pipe in small quantities, to our various gas plants, we will say, throughout the country. Those two arrangements are identical; that is, as far as the list is concerned, and as far as the discounts are concerned, they are the same.

Q. That is, they give the same discount?

A. Yes.

Q. From the same list?

A. From the same list.

Q. In what proportion do you divide between those two?

A. I try to satisfy them both. I do not know just what the percentage is. They are all after business.

Q. They are all after business?

A. Yes; and we make those arrangements as a matter of convenience, to save routine in our office in placing orders, to save time in the transmission of mails, and so forth.

Q. And so, so far as that contract or arrangement is concerned, they give the same price?

A. The same price; the same discount.

Q. Has not that been practically true of the other discounts?

A. What other discounts?

Q. I just want you to mention any others that you have in mind. I asked you to mention them, and that is the only one you did mention.

A. We are talking about tubes and pipe?

Q. Oh, yes, in tubes. I am coming to the other later.

A. You are talking of pipe, now. These discounts on contracts based that way usually run about uniform.

Q. That is to say that you pay the same price to the manufacturers who furnish you under these continuing contracts?

A. To manufacturers, unless we happen to be dealing with jobbers. We might go out in an emergency case and buy from a jobber, where probably a different discount would apply.

Q. What other arrangement with respect to pipes and tubes for any particular year can you refer to where you took bids or tenders, and where the prices varied? And if so state who you took them from, when the contracts were, and what the variation was.

A. I could not go back over those records. I can give my

present arrangement. I would have to refer to my records in order to give you any information about previous arrangements.

Q. That is all you can give now?

A. Yes.

Q. And as to that arrangement, the base price is uniform as to the two that you buy from?

A. Yes.

Q. Take fabricated structural material: Do you purchase any unfabricated structural material to any extent?

A. Very few shapes.

Q. So in structural material the bulk is of fabricated material?

A. Yes.

Q. In 1906 about what percentage did you buy of fabricated structural material?

A. I cannot say.

Q. Do you know whether that year you bought from manufacturers or jobbers, or both?

A. Well, we always buy from manufacturers; that is, the fabricator. Whether the fabricator rolls the raw product that goes into the fabrication of the steel I do not know. We buy fabricated material from the manufacturers.

Q. And not through jobbers?

A. Not through jobbers.

Q. So there would be no question, then, as to the percentage between jobbers and manufacturers on fabricated material?

A. I never heard of a jobber handling fabricated structural steel.

Q. Leave out the jobbers, then.

A. Yes.

Q. And take the year 1906; you say you cannot give approximately the amount that you purchased?

A. I have no idea.

Q. Can you give those manufacturers from whom you did purchase during that year?

A. No. I could not name them.

Q. Do you bear in mind any details or facts in regard to

the particular contracts of that year, the prices that were offered upon tenders or bids, and what the variation was?

A. I do not, Judge. The scope is too wide. We are doing business all over the world and I would have to have some particular contract in mind in order to give expert testimony on that line.

Q. I just want to know how far you are willing to commit yourself to that sort of statement.

A. I am willing to commit myself so far as it is reasonable for me to go back and recollect; but I could not go back to 1906.

Q. Then, as to 1906, as I understand you, Mr. Chilson, you do not carry in your mind any recollection of any particular transaction or bids or variation in prices?

A. No, sir.

Q. In respect to structural steel; suppose I should put that same line of questions to you for 1907, your answers would be substantially the same?

A. Substantially right down to the present time; I do not think I could rehearse the last order I placed, within a month or two months.

Q. Take wire rope: You purchased it from time to time during the period from July, 1906, down to the present time, you stated, from Roebling, American Steel & Wire Company, from Leschen, The Hazard Manufacturing Company and Broderick & Bascom. Now, during 1906, do you know approximately the amount of wire rope that you purchased?

A. No, sir.

Q. Have you a recollection as to the persons from whom you purchased during that year?

A. No, sir.

Q. Have you any recollection as to any contracts of purchase during that year, or any bids?

A. Did you mention persons or concerns?

Q. I use a corporation the same as a person.

A. I do not remember, except the general list would apply. I must have made some purchases from practically all those concerns; I do not recall which.

Q. But you do not recall on any particular contracts what

the prices were, or the variations in prices, or what the bids were?

A. No, sir.

Q. For 1906?

A. No, sir.

Q. Suppose I repeat that same line of questions for 1907, 1908, 1909, 1910 and 1911; would your answers be the same?

A. I suppose I could tell you something about to-day's market; back of that I could not tell.

Q. Back of that your answers would be substantially the same as they were for 1906?

A. Yes.

Q. Now, in steel bars, do you know approximately the extent of your purchases in 1906?

A. No, sir.

Q. Or whether you purchased them during that year from jobbers or manufacturers, or both?

A. I should say undoubtedly from both; I have no distinct recollection.

Q. Do you remember the proportions in which these purchases were divided between the two?

A. Nothing whatsoever.

Q. The prices at which contracts were let?

A. No, sir.

Q. Have you any recollection as to that year?

A. No, sir.

Q. As to the bids on any particular contract, or the variation in bids, what they were and who made them?

A. No, sir.

Q. Would your answers be the same in respect to 1907, 1908, 1909, 1910 and 1911?

A. Substantially the same, yes.

Q. Were your purchases in bars made separate from your purchases of structural material?

A. Yes. I might correct that last statement. You asked me if these bars were purchased separately from the structural material. There may have been some bars in the contract providing for structural material, bars made up and

worked into some shape or form, riveted to another piece; I do not know.

Q. But generally?

A. Generally, no, I should say.

Q. Now, there were certain kinds of bars that were known as standard sizes in the market, were there not, base size?

A. Yes, it is all worked on the card.

Q. Didn't the manufacturers send out list prices on bars, which prices through long periods of time would be the same for all the manufacturers?

A. Yes.

Q. You would solicit discounts from those, would you?

A. No, it is not worked on the basis of discount. It is worked on a list of extras applying for certain sizes over and above the base.

Q. And the base would be taken as the point from which to figure what additional amount would be added according to the extras, would it not?

A. That is my recollection.

Q. But the base for the various manufacturers was substantially the same throughout long periods, was it not?

A. The base price?

Q. Yes.

A. No, I should say not. The list of extras would be the same for certain sizes over and above the base, but your base price for the product or commodity itself—we will say the Pittsburgh basing price—no, I should say the prices varied undoubtedly from time to time throughout the year.

Q. They varied from time to time, but do you mean to say that over long periods they were not substantially the same among the larger manufacturers?

A. No.

Q. Do you mean that they had a difference in base prices, or list?

A. No; now you are confounding list with base. The base price to-day might be $1.45; to-morrow it may be $1.65, but your list of extras remains the same for certain sizes and shapes over base.

Q. And that list was substantially the same over long periods throughout the manufacturers?

A. The list of extras, I think, is standard; known as full and half national card extras.

Q. Coming down to the question of base price, did not this base price for bars remain substantially the same over long periods of time?

A. No, sir; not to my recollection.

Q. Have you any distinct recollection about that, that they did not?

A. I have known that the market fluctuated, and is fluctuating from year to year for the last few years.

Q. Fluctuating from year to year?

A. During the year, we will say almost from month to month there were changes.

Q. Were there not periods when for several months there would be no changes?

A. Possibly, but I have no recollection now.

Q. You have no recollection?

A. Changes on the part of whom, the various manufacturers or any particular concern?

Q. No, no; I mean the general market base price, if there was such a base price.

A. The base price is the nominal quotation we read in the newspapers, but when we solicit the market, we will find that it is more or less fictitious. You will get your price when you go after it.

Q. But those prices have remained for long periods about the same?

A. No, I have not any recollection of it.

Q. Of what time are you speaking?

A. Over the same period that you mentioned; I am not mentioning any particular period. These prices do not seem to me to have remained stable in any particular quarter.

Q. How far back have you any distinct recollection as to the matter about which you are testifying?

A. I am just taking my general knowledge of market conditions. I am not picking out any day or week or year or

month. I am just giving you my knowledge as to the market conditions.

Q. You mean to say that from July 1, 1906, down to the present time there have not been periods where this base price as quoted in the market would run substantially the same for months at a time?

A. I could not say; it may have been a month at a time. One manufacturer might have held his price for six months, for all I know, but you go out and seek a number of them and I believe the records will show, among the men who did the purchasing during that period, that there had been fluctuations; that there were fluctuations.

Q. But you do not undertake to say over what periods they were?

A. I could not.

Q. Do you know as to whether or not, with large numbers of manufacturers for periods of time embracing consecutive months, the base prices were not the same?

A. I do not remember any base price in the bar trade. I do not connect it.

Q. But we have been talking of that.

A. Yes; we have a "base," but there is no uniformity. My recollection does not go back to any uniformity as far as base prices are concerned. One concern may quote $1.50, another concern $1.45 and another $1.55. That would be the basing price. I think your bar market today is about $1.45, although I think you can buy it as low as $1.20 if you go after it.

Q. That would be the basing price?

A. No; that would be the nominal quotation, what we call newspaper quotations, which are not worth much.

Q. To that price, whatever is quoted, why then, the extras are added?

A. Yes, extras for size.

Q. And those have been uniform, have they?

A. The extras for size?

Q. Yes.

A. Yes, I have never known of a change in the—well, in the last six or seven years, I think they have been quite stable.

Q. Do you know anything about the open market in 1911?

A. Well, I do not. That is a pretty broad question.

MR. SEVERANCE: I do not think the witness understands that you are using that as a technical expression which has grown up in this trial.

MR. DICKINSON: I will ask him so that we will understand each other.

By MR. DICKINSON:

Q. Was there or not a period in the year 1911, in the steel trade, and embracing some of the articles which you have described as being a purchaser of, where the market was known as an open market?

A. I have always found the market open. I never knew it closed as regards price and I was always able to get competitive figures.

Q. I am not asking you that. Maybe I do not make it perfectly plain.

A. Then I do not understand what you mean by the term "open market".

Q. Don't you know as a matter of fact in the year 1911 there was a sharp break in the market that was so notorious that every man in your line of business was bound to know of it and that it was known as an open market and continued that way for some months?

A. I would not recognize that any more than there is an open market today or there was a year ago or two years or three years ago.

Q. So if there was anything like that you did not know anything about it?

A. I read it. I heard of it, but I never discovered it in my daily business.

Q. You did not discover, then, during 1911, a sharp fall in prices during that period that the papers spoke about as an open market?

A. Yes; we met them.

Q. You mean to say that there was such a fall in prices?

A. I have always found a fall and rise continuously. I do not recollect any distinct period where we have had high

and low markets. I have found the market varying from time to time.

Q. And you do not know, then, of any period during 1911, which, as contrasted with the period before and after that, was so sharp that it was known in the trade parlance as an open market? If any such thing as that occurred you do not know it?

A. The pipe purchase that I spoke about, that big purchase, was a case where we took advantage of low market conditions.

Q. When was that?

A. That order was placed on December 28, 1911.

Q. And you took advantage then of low market conditions?

A. Yes, sir.

Q. At that time had there not, as contrasted with what had prevailed for a long time anterior thereto, been a very sharp falling off in prices?

A. On all steel products?

Q. No, some of the steel products to which you have referred?

A. I have just mentioned there was in pipe.

Q. And bars?

A. And bars. I do not remember any particular reduction in bars at that time.

Q. How about 1909. Do you know anything about an open market in 1909?

A. My mind does not lead me back that far so that I can pick out any distinct reduction or advance in price.

Q. And if there was any such thing occurred in 1909 as I have described generally in respect to 1911, you do not know anything about it?

A. I do not recall it at this time.

Q. You do not recall it?

A. No, sir.

Q. What was the extent of your purchases in bars for 1912?

A. I could not tell you.

Q. For 1911?

A. I could not tell you.

Q. Or in 1910?

A. I could not tell you.

Q. Can you give them for any year since you have been general purchasing agent?

A. No, sir.

Q. Neither in tonnage nor amount?

A. No, sir.

Q. You cannot give it approximately?

A. I do not think it is possible. Our business is of such a nature that it all depends on whether we are doing contracting work of a large or small volume as to what our purchasing amounts to. We might have a big year and a lean year.

Q. Did you actually, yourself, make any purchases of bars for your company in 1909?

A. You mean did I conduct the negotiations?

Q. Yes, did you conduct the negotiations or was it done by some of your subordinates?

A. It might have been by some of my assistants. I have no particular recollection of purchasing any quantity of bars from any concern in 1909.

Q. How about 1910?

A. I would say the same applies.

Q. Do your assistants sometimes have large discretion in those matters?

A. Reporting to me, yes.

Q. Reporting to you after it was done?

A. No, usually before the transaction. If the transaction is of any note at all it is done through me.

Q. What do you mean by transactions of any note?

A. Involving any sum or involving any intricate problems with regard to delivery, transportation and insurance.

Q. Supposing it does not involve any large sum and does not involve any such intricate questions as you have indicated, do your assistants have discretion in making purchases; as a matter of fact, do they go ahead and make purchases?

A. Oh, yes.

Q. Upon their own authority?

A. Yes.

Q. They take bids?

A. Yes.

Q. Or tenders?

A. Yes.

Q. And conduct the whole transaction?

A. Yes, sir.

Q. Could you tell for any of those years what proportion of the purchases of rods and bars were conducted independently of you?

A. No, sir.

Q. How about wire rope, is that the same way?

A. The same applies.

Q. And how about structural material?

A. Well, I think I can safely say that I have handled practically all the structural steel myself.

MR. DICKINSON: That is all.

RE-DIRECT EXAMINATION

By MR. SEVERANCE:

Q. Speaking about that card price, or list price of pipe: Do you remember about what year it was that that list was first published? About 1900, was it not?

A. I do not know.

Q. Long before your day?

A. Ever since I have known anything about pipe it has been bought on the same basis; the same scheme of selling has been in existence.

Q. For the sake of getting some idea of how close that list price approximates to the actual price, about what are the discounts ordinarily allowed from that list price?

A. You are speaking now of tubes. Tubes are sold on the basis of a net price per foot. Merchant pipe is sold on the basis of certain list prices applying usually per foot with the discount. I think the discount on merchant pipe running from a quarter to three-eighths inch would be 81.5—that is, 81 per cent.

Q. 81 per cent. less than the list price?

A. Yes, or a man might quote you 82. When you get above

⅜-inch and run into the higher sizes, running up to three-inch, the discount varies according to the size or diameter of the pipe; that is the regular mill specifications of pipe; so that the list has nothing to do with the actual result except as a basis to work on. It is a basis for figuring the price, and about the only way you can get down to figuring a price quickly.

Q. That is what I wanted to develop, that the discount is so great that the list price is four or five times the actual selling price?

A. The same thing applies not only to pipe, but many other commodities in the market.

Q. Outside of steel?

A. Yes; many other commodities.

Q. What other commodities outside of steel products are sold in the same way?

A. Screws, for one thing; screws may be a list price, and then from your list you get discounts of 95 and 10 and 4½ and 6, 7 and 5. That is the bane of our existence.

Q. When you say 95, you mean 95 per cent. off, 10 per cent. off the remaining 5, and so on?

A. Yes; 10 per cent., and then 10 per cent. off of the remainder, and right on down the line.

Q. That is the practice in a good many things, is it not?

A. Yes; that has been my experience.

Q. Counsel was asking your recollection of specific purchases. You stated, I think, did you not, that your business is one that extends all over the world?

A. Yes, sir.

Q. And your purchases——

A. Pardon me; the business of our allied companies, I mean.

Q. That is what I mean.

A. Our business comprises the United States and its possessions. Our London company works in the balance of the world.

Q. And your purchases are of very great volume and in many lines, are they not?

A. Yes, sir.

Q. And have been during all these years since 1906?

A. Yes, sir.

Q. You have some assistance in your office to aid you, have you not?

A. Yes, sir.

MR. SEVERANCE: That is all.

RE-CROSS EXAMINATION.

By MR. DICKINSON:

Q. There is one matter that I omitted to ask him about, and about which I would like to interrogate him.

MR. SEVERANCE: Very well.

By MR. DICKINSON:

Q. You spoke about your wire purchases from July 1, 1906 down, and in a general way about variant bids and competition. Did you know anything about a wire pool existing during that time?

A. I heard that there was one. I never felt in in my business. I was always able to get competitive prices.

Q. Did you solicit bids in writing from various manufacturers——

MR. SEVERANCE: May I suggest to you, Judge, that there is no evidence in the case of any wire pools in the character of wire that he is testifying about.

MR. COLTON: I think you are mistaken about that, Mr. Severance. There was a wire pool in wire rope. That is admitted in the answer and proved in the testimony.

MR. SEVERANCE: I am not talking about wire rope. The witness has already been examined about wire rope fully by Judge Dickinson. He is talking about wire. The Judge said "wire."

MR. DICKINSON: I will come back to wire rope.

MR. SEVERANCE: Just a moment. The witness stated that he bought certain wire called form wire. There is nothing in the record as to any pool in form wire. I wanted to call the Judge's attention to that, because I thought he would be misleading himself.

By Mr. Dickinson:

Q. I will ask about wire rope. Did you know anything about pools in wire rope?

A. I had heard of some sort of a pool, but as I said, it never affected me in my business. I have always been able to get competitive figures.

Q. You would send out to these various makers solicitations for bids on your requirements?

A. Yes.

Q. And you got bids from them?

A. Yes.

Q. Do you know as to whether or not those bids were referred to any pool or pool agent?

A. Never to my knowledge.

Q. If they were, you do not know anything about it?

A. I do not know anything about it.

Q. Do you know who Mr. Jackson was?

A. I have heard of him, yes.

Q. Do you know anything about the division of tonnage among the various manufacturers?

A. No, sir.

Q. You know nothing about that?

A. No, sir.

Q. You do not know how your bids may have been handled, except sometimes they would come back to you with variations?

A. I did not care. It was none of my business. What I had to do was to place my orders, and I always got competition. I did not know what they did back of that.

Q. You did not care whether it was in good faith or not?

A. In good faith?

Q. The competition, yes.

A. I do not think anybody would dare to put in a quotation to us except in good faith and expect any future patronage from us.

Q. I am not speaking about the bid being in good faith in that sense, but——

A. That is the only sense in which——

Q. But did you care nothing as to whether the competition was in good faith?

A. I recognized it as being in good faith, as long as it was good competition.

Q. As long as you got some varying prices?

A. Yes; that was competition.

Q. That was evidence to you that there was competition?

A. Yes; it was about the only thing which I could recognize as evidence of competition.

Q. But you do not know how they dealt among themselves?

A. No, sir.

Q. Or how your bids were handled?

A. No, sir.

MR. DICKINSON: That is all.

MR. SEVERANCE: That is all.

HARRY W. GODDARD

was called as a witness on behalf of the defendants, and being first duly sworn, testified as follows:

DIRECT EXAMINATION.

By MR SEVERANCE:

Q. Where do you reside?

A. Worcester, Massachusetts.

Q. What is your business?

A. President and treasurer of the Spencer Wire Company.

Q. How long have you occupied that position?

A. Since 1895.

Q. How long have you been connected with the Spencer Wire Company?

A. Since 1881.

Q. How old a concern is the Spencer Wire Company?

A. It was probably started about 1820, although it was not incorporated as the Spencer Wire Company until 1876.

Q. Where are the plants of the Spencer Wire Company?

A. At Worcester and Spencer, Massachusetts.

Q. When was the Worcester plant built?

A. In 1899 and 1900.

Q. What has been the fact as to whether or not your company has increased its output in the last ten or twelve years?

A. It has doubled in the last ten years; practically 95 per cent. larger than in 1903.

Q. What classes of products do you manufacture that are also made by the American Steel & Wire Company, if you know what articles they make?

A. All grades of iron and steel wire. We make about everything they do, except a few lines that I have in mind, if you want them.

Q. Yes. What are the lines that the American Steel & Wire Company make on any scale, as far as you know, that you do not make?

A. Copper and insulated wire, barbed wire, field fencing—fencing of all kinds, in fact.

Q. Do you make netting?

A. And wire netting. That is about all that we do not make, although I might add that wire nails we make on a small scale, whereas they make them on a very large scale.

Q. Do you make any kind of insulated wire?

A. Not at all.

Q. There has been some reference made here the last few minutes to certain wire pools. Were you in any wire pools?

A. Not at all.

Q. Are there any classes of wire that you can name, Mr. Goddard, outside of the ordinary plain wire sold in the market, that are, what we might call specialties, that are also made by the American Steel & Wire Company? Can you name some of them?

A. Yes; there are a large number.

Q. Name some of them, please.

A. Let me understand your question right.

Q. I am asking you for classes of wire that might be termed specialties; that is, something outside of the ordinary kind of plain wire sold in the market, which is made by you and sold in competition with the American Steel & Wire Company.

MR. COLTON: Would you pardon a suggestion there from me, Mr. Severance?

MR. SEVERANCE: Yes.

MR. COLTON: Do you mean other than the barbed wire and fence wire, and wire of that type?

MR. SEVERANCE: No; other than plain wire. I do not know how to describe it very well. I should say specialties. There may be special kinds of wire product, I mean.

THE WITNESS: We make a specialty of fine wires and high-grade wire, that is, tempered wires of all kinds, flat wires of all sizes, clock springs, clock spring wire, artificial flower wire, bookbinders' wire, book stitching wire, boot and shoe wire of forty or fifty different kinds, fine weaving wire, both from steel and from imported Swedes' iron, tin package card wire, car seal wires of all kinds, twisted wires and odd shapes, wires for clocks. There are forty or fifty varieties of that. Pinion wire, that is, shaped like a gear with teeth all around it except that it is in bars instead of being in small gears; and shapes; that is, half round or triangular or octagon or hexagon. Do you want any more?

By MR. SEVERANCE:

Q. Yes, keep on.

A. Bonnet wire, for hat frames for women to wear, and hat wires for men's hats, which is entirely different, and ring traveler wire, which is a very important wire for spinners' use in fabricating goods; card wire for card clothing, chain wire, wire for buckles, rivet wire, spring wire, tubular wire, that is, wire with a hole through it; what we call track wire, which is similar to a trolley wire, except that it is made of steel instead of copper. I presume there are many others.

Q. Do you make tag wire?

A. Yes, for stringing tags.

Q. Do you make what is called box-stay wire?

A. In very large quantities?

Q. What is it used for?

A. That is in the corner of paper boxes, there is a wire stay. Then also box strapping wire is a very important industry, for strapping wooden cases.

Q. Do you make a wire that is used for weaving mine cloth?

A. Yes.

Q. That is imported material, is it?

A. The wire rods are imported. Then we make charcoal iron, which we draw down into wire.

Q. That is not made by the American Steel & Wire Company, is it?

A. Not at the present time, not for the past three or four years. They abandoned the manufacture, and we took it up.

Q. Are these other varieties of wire that you mentioned made by the American Steel & Wire Company?

A. Yes.

Q. What is chenille wire?

A. It is wire that is covered with silk and goes into the upholstery trade.

Q. Do you make that?

A. Yes.

Q. Do the American Steel & Wire Company make any?

A. Yes.

Q. Do you make wire for pianos?

A. Yes.

Q. Do the American Steel & Wire Company make that?

A. Yes.

Q. Are these articles that you have mentioned all the kinds of wire that you make, or do you make other kinds?

A. No, we probably make four hundred different kinds, and of those different kinds there are 100 sizes to each variety of wire.

Q. What is the fact as to whether or not the American Steel & Wire Company manufacture practically all of these kinds of wire?

A. They do.

Q. And are they in competition with you on the sale of the same?

A. Yes, unless it is the charcoal iron.

Q. I have already eliminated that; how about the others?

A. The others they do.

Q. What other concerns are there that are manufacturing certain of these varieties, or plain wire, perhaps, in competition with you?

MR. COLTON: I object to that as indefinite, because it does not appear in what the competition is.

MR. SEVERANCE: You may answer.

THE WITNESS: That is, the names of the competitors?

By MR. SEVERANCE:

Q. The names of the competitors.

A. John A. Roebling's Sons, Youngstown Sheet & Tube Company, Cambria Steel Company, Wickwire Brothers, Igoe Brothers and George W. Prentiss & Company.

Q. Where are they located?

A. Holyoke, Massachusetts. Seneca Wire Company; they are at Fostoria, Ohio, the Grand Crossing Tack Company, and the Wright Wire Company.

Q. Where are they located?

A. Worcester. The Morgan Spring Company, Washburn Wire Company. I do not recall any more at the moment.

Q. In what branches of wire are you in competition with the American Steel & Wire Company, Cambria, Jones & Laughlin and Youngstown, chiefly?

A. If you eliminate the first, I should say very little competition with the last three.

Q. Very little?

A. The last three that you mention do not make fine wires; that is they do not go beyond No. 16 wire gauge, while the American Steel & Wire Company do.

Q. That is just what I want to get at. In what particular wire are you in competition with Cambria, Jones & Laughlin and Youngstown?

A. In the way of market wires, what are called coarse market wires, which are larger than No. 16 wire gauge.

Q. And they are also made by the Steel & Wire Company?

A. Yes.

Q. And by other concerns among this list you have mentioned, what other of those companies make this class of

product that is made by the Youngstown, Cambria and Jones & Laughlin?

A. They all make it.

Q. All of them make it?

A. Yes.

Q. As to these fine wires, those you have denominated specialties, which ones outside of the American Steel & Wire Company are in competition with you as to that?

A. Principally John A. Roebling's Sons and George W. Prentiss Company; they are our largest competitors.

Q. What about Igoe Brothers?

A. They confine themselves principally to coarse wire and wire nails.

Q. You do not make nails?

A. Yes, but only to a small extent.

Q. In what line are the Wright Wire Company?

A. They originally made nothing but wire netting and wire cloth, but of recent years they have gone into the general wire market to some extent.

Q. And the Grand Crossing Tack Company?

A. Why, we meet them in competition in coppered and market wires in the western trade; they come east very little with wire.

Q. And the Seneca Wire?

A. Fine wire for weaving purposes.

Q. The Washburn Wire Company?

A. Mostly in flat wires and piano wire.

Q. Wickwire Brothers?

A. In coarse market wires and tinned wires. They make a specialty of tinned wires for lantern purposes, and things like that.

Q. What is the fact according to your experience, as to whether the American Steel & Wire Company is in competition with these other concerns in the same lines of products that you are?

A. They are.

Mr. Colton: Would you ask him to specify which he referred to as these other concerns at that time?

MR. SEVERANCE: The ones he has mentioned. I have just gone through the whole of them.

MR. COLTON: If he means the list of manufacturers of specialties, it will save cross examination if that is what he refers to.

MR. SEVERANCE: It covers both the specialties and what is called the market wire. I have asked him in detail as to what particular line he was in competition with. Now I have asked him whether the American Steel & Wire Company were likewise in competition with these people. He says they were.

By MR SEVERANCE:

Q. You understood my question didn't you?

A. Yes. You call them specialties. We do not call them specialties. It is in the regular run of work.

Q. That long list of articles that you mentioned are what I have been calling specialties. You do not call them that, but I am denominating them that so as to distinguish them from the ordinary market wire.

A. Yes, sir.

Q. What has been the fact, Mr. Goddard, as to whether the competition between these various concerns, including your own and the American Steel & Wire Company, has been an open, uncontrolled competition?

A. Always.

Q. Are you in the wire rope business?

A. Yes, sir.

Q. How long have you been in it?

A. Two years.

Q. What other concerns do you meet in competition in the wire rope trade?

A. American Steel & Wire Company; John A. Roeblings' Sons; Broderick & Bascom; Hazard Manufacturing Company; Williamsport Wire Company.

Q. Where are they located?

A. Williamsport, Pennsylvania. A. Leschen & Sons, St. Louis; Waterbury Wire Rope Company, or Waterbury Company.

Q. Waterbury, Connecticut?

A. No, New York City and Brooklyn.

Q. How is the competition in the wire rope business, and how has it been since you went into the business, as to being open and uncontrolled, or otherwise?

A. Very open.

Q. What is the fact as to whether some wire products are at times sold through bids; that is, bids or quotations?

A. That is the way that it is generally done.

Q. And what has been your experience as to whether these bids that have been put in, in cases where you have competed, have been uniform or varying?

A. Very varied.

Q. And is a large part of the wire product that is made sold on such bids?

A. It is.

Q. Just for the purpose of getting some idea of the extent of your business, about how many customers have you ordinarily?

A. We have 5,000 active accounts on our books.

Q. Are there any of these wire products that you make that have been made by your establishment for a particularly long period of time?

A. Yes, there is card wire, ever since 1845; it has been a very large product; and fine weaving wire has always been a staple product.

Q. Then you were in that business long before the American Steel & Wire Company entered into the trade?

A. You mean the present American Steel & Wire Company?

Q. Yes.

A. Oh, yes.

Q. What do you mean by rivet wire?

A. Wire for making rivets.

Q. By the way, do you make hooks?

A. Yes.

Q. Is that a large business?

A. Yes; I should say we probably run ten people on hooks all the time in the factory. Pardon me; did you say hooks or hoops?

Q. Hooks.

A. Hooks, yes.

Q. That is a competitive article with these other people?

A. Yes.

Q. Including the American Steel & Wire Company?

A. Including the American Steel & Wire Company.

Q. And the testimony you have given with reference to the other commodities would apply to that, as far as the competition is concerned?

A. Yes, only to a less extent; there are probably very few that make hooks, of those companies that I have mentioned. We would term that a specialty.

MR. DICKINSON: Do you mean hooks and eyes?

THE WITNESS: No. One hook, for instance, would be for automobile chains. We make hooks for that. Orders will come for a million or two million hooks that simply go into that. That is one kind of a hook. Another kind of a hook is a drapery hook; house-furnishing people use these for hanging curtains or putting curtain fixtures on. Now, we just received an order for five million of these hooks made of wire, for curtain purposes. Then there are hooks for hanging pictures on the wall. There are a dozen different kinds of hooks.

By MR. SEVERANCE:

Q. You said that there were probably 50 varieties of boot and shoe wire?

A. Yes, sir.

Q. What is boot and shoe wire; what is it used for?

A. In the manufacture of boots and shoes, wire enters into the manufacture to a great extent. Next to leather, it is the most important in it. That is, there are the nails that go into the heels, and it is wire that holds the shoe together while it is being formed. Then it is wire that is in the lacing studs, and it is wire that is in the eyelets; great varieties.

Q. How does it happen that there are 50 varieties of that?

A. Different sizes and different kinds that go into the manufacture. For instance, in that little fancy nail, what is

called a slug wire—the little fancy nail that holds the top lift on the heel, there are 15 different styles of that.

Q. You spoke of clock wire as being made in probably 50 varieties?

A. Yes; all the inside of a clock is wire.

Q. You spoke of a variety of twisted wire.

A. Yes; that goes into anywhere from 2-ply to 6-ply. It is twisted together for different purposes, mostly for car seals. That is the principal use of that.

Q. Car seals?

A. Yes.

Q. Railroad car seals?

A. Yes, sir.

Q. What do you mean by card wire?

A. That is wire that makes the teeth that are set in leather or rubber for carding the fabrics, either cotton or wool or worsted. That is, the first preparation for weaving is carding, and card wire is for the little teeth that are set in the clothing.

Q. Then you had one kind that you called shape wire. What is that?

A. That is triangular, half round, quarter round; different shapes.

Q. Called that because of the shape of the wire?

A. Because of the shape of the wire.

Q. One other question that I forgot to ask you: In what part of the country do you sell your product?

A. All over this country.

Q. All over the United States?

A. Yes.

CROSS EXAMINATION.

By Mr. Colton:

Q. You have been a purchaser of rods, I suppose, for your wire business for a great many years, have you not?

Mr. Severance: I want to reserve an exception to this as not cross examination, wire rods not having been gone into on direct examination.

The Witness: Yes.

By Mr. Colton:

Q. And you are quite familiar, from the point of view of purchase with the rod market?

A. Yes.

Q. It is a fact, is it not, that for the last ten years, as between the different manufacturers of wire rods, prices have been substantially uniform?

A. Substantially so.

Q. Could you give me the prices of wire rods for the last ten years?

A. Yes.

Q. All right, if you will.

A. May I refresh my memory?

Q. If you made a memorandum. Suppose you begin with 1901.

A. Do you want the price at Pittsburgh, or the delivery price?

Q. Give it at Pittsburgh; and then there is $3 added, is there not?

A. $3 added for freight.

Mr. Severance: For what?

Mr. Colton: For wire rods.

Mr. Severance: To where?

Mr. Colton: To Worcester.

The Witness: You want 1901?

By Mr. Colton:

Q. Beginning with 1901.

A. An average price?

Q. Yes. What do you mean by the average price there?

A. Well, I get at that from taking twelve months' purchases and dividing it by twelve.

Q. From your purchases?

A. Yes.

Q. All right. Give your prices, then.

A. This is the price at Pittsburgh, f. o. b. Pittsburgh:

1901, $37.50;

1902, $37.50;
1903, $39.00;
1904, there was a break, $31.50;
1905, there was a good deal of variation; they ran from $33.00 to $36.00.

Pardon me, I want to make a correction of the figures I have been reading. These have all been delivered prices, instead of the Pittsburgh price. Is that clear?

Q. Yes. Suppose you now give the Pitttsburgh price over again, making the subtraction as you go along.

Mr. Severance: What is that?

The Witness: He wants the Pittsburgh price instead of the delivered price.

Mr. Severance: Are these prices you gave the delivered prices?

The Witness: The delivered price, yes.

Mr. Severance: As I understand, they are the average for the year?

The Witness: Yes.

Mr. Severance: It is understood that all of this is covered by my objection as not cross examination?

Mr. Colton: Yes.

The Witness: 1901, $34.50;
1902, $34.50;
1903, $36.00;
1904, $28.50;
1905, $30.00 to $33.00;
1906, $31.00 to $34.00;
1907, $35.00;
1908, $32.80;
1909, $29.65;
1910, $28.25;
1911, $26.35;
1912, $25.50.
At the present time, $26.50.

By Mr. Colton:

Q. You spoke of a break in one of those years; I think it was 1904?

A. Yes.

Q. During the year 1901 would the price, as between the different manufacturers, in respect of rods, be substantially the same as you have said it was for the last ten years? Would that be true of the year 1901 also?

A. Yes.

Q. That would be true of 1902?

A. Yes, sir.

Q. Of 1903?

A. All the way down.

Q. As to the fluctuation during the years: As I understand it this is the average price you have been giving?

A. Yes.

Q. During the years 1901, 1902 and 1903 were there any substantial fluctuations in the price of wire rods?

A. No substantial ones.

Q. Could you, from looking at those figures, name the years in which there have been substantial fluctuations in the price of wire rods?

A. Yes. In 1905 and 1906.

Q. Are those the only two years in which there have been?

A. Substantial ones.

Q. The American Steel & Wire Company acquired practically all the wire rod mills in the United States on its formation, did it not?

Mr. Severance: Objected to as not cross examination. I went into nothing about that.

The Witness: Yes.

By Mr. Colton:

Q. Preceding the formation of the American Steel & Wire Company there was severe competition in the sale of wire rods, was there not?

Mr. Severance: I desire to object to all questions along this line on the ground that it is not cross examination.

The Witness: Yes.

By Mr. Colton:

Q. Were prices in wire rods low preceding the formation of the American Steel & Wire Company?

Mr. Severance: I object to that as calling for an opinion, in addition to not being cross examination.

By Mr. Colton:

Q. Say during 1897 and 1898?

A. Yes.

Q. What were the prices during 1897 and 1898 at Pittsburgh?

Mr. Severance: It may be understood that my objection covers all of these questions?

Mr. Colton: Yes; that is understood, Mr. Severance.

The Witness: That would have to be from recollection.

By Mr. Colton:

Q. Yes; the best of your recollection. That is what I wish.

A. From $20 to $25 a ton.

Q. After the formation of the American Steel & Wire Company was the price of wire rods advanced at any time, between that and the year 1901?

A. Yes, sir.

Q. And about how much was it advanced per ton?

A. There was an advance of probably $20.

Q. And then, after that advance, was it dropped at any time prior to the organization of the United States Steel Corporation?

A. Yes.

Q. And about what was the extent of that drop?

A. From my memorandum, I should say it dropped $15.

Q. And it went up again in 1901, necessarily, about $15 a ton?

A. Yes.

Mr. Severance: Why do you say "necessarily?"

Mr. Colton: From his previous statement.

Mr. Severance: What do you mean?

Mr. Colton: He had already testified that it was about $15 lower than it was in 1901, and I was just bringing it out again.

By Mr. Colton:

Q. However, I will ask you if it did not go up during the period of 1900 to 1901 about $15 a ton? A rise of about $15?

A. From 1899 to 1901 it did.

Q. Some time during that period it rose?

A. Yes.

Q. Do you know what the price was in 1900, approximately, of wire rods?

A. I should say about $25.

Q. And in 1901 it advanced to about $34.50?

A. Yes.

Q. Now, between 1901 and October 26, 1911, has the price of wire rods ever been as low as it was in 1897 and 1898?

Mr. Severance: He has already given you the exact figures for both periods. It does not make it any stronger to have him say one was bigger than the other.

The Witness: No.

By Mr. Colton:

Q. During that same period, from 1901 on, up to October 26, 1911, has it ever been as low as it was during 1900?

A. No.

Mr. Severance: What do you claim, that the organization of the American Steel & Wire Company brought the price down in 1900? Is that what you claim?

By Mr. Colton:

Q. Wire rods is primarily raw material that you use in your business?

A. Yes.

Q. And that is true as to all manufacturers of wires?

A. Yes.

Q. That is, of steel wire?

A. And iron wire.

Q. Those manufacturing steel wire necessarily use first and last the wire rods? They go back to that as the source of their raw material supply?

A. Yes.

Q. I believe you testified in your direct examination that

you did not manufacture to any extent the heavier wire products such as barbed wire, fence wire and standard wire nails?

A. Yes.

Q. That is correct?

A. Yes.

Q. You do manufacture what is known as coarse wire?

A. Yes.

Q. Which is a great deal heavier than the general run of wires manufactured by you, heavier per inch or per linear measure; I suppose that is the way you would measure the weight of wire, is it?

A. Yes.

Q. And that ranges in size from about 1/16 of an inch to half an inch?

A. Yes.

Q. Now, you said that you did not call specialties these numerous fine wires that you manufacture?

A. Yes, sir.

Q. And in contrasting them with the heavier products, such as barbed wire and standard wire nails, they have much greater individuality, do they not?

A. Yes.

Q. And the price of those depends rather more on the particular manufacturer from whom the purchaser is getting them; is that correct?

A. Yes.

Q. You named a large number of companies that manufacture the various specialties that you have named, or some of them?

A. Yes.

Q. You do not mean to say that any one of those companies, other than the American Steel & Wire Company, manufactures all of these specialties?

A. Probably not the entire line.

Q. Your whole testimony was that if you took that list of manufacturers, they would manufacture several of these different fine wires concerning which you are testifying; is that correct?

A. Yes.

Q. Are the prices of these fine wires quoted in the Iron Age?

A. No.

Q. Is anything quoted in the Iron Age from which you can figure anywhere near the price of these fine wires?

A. No, sir.

Q. Have they any trade quotation at all on these fine wires?

A. No, sir.

Q. Now, since the formation of the United States Steel Corporation about what per cent. of your total requirements in raw material products have been from the American Steel & Wire Company, or other subsidiaries of the United States Steel Corporation?

A. Well, for what period of years?

Q. Since the formation of the Corporation to date?

A. Well, they have varied.

Q. Could you give me the average?

A. Why, ten years ago it was probably 75 per cent.; five years ago it was probably 70 per cent., and to-day it is not over 65 per cent., probably.

Q. Of wire rods it is probably not over 65 per cent.?

A. 65 to 70.

Q. Are you confining that to the American Steel & Wire Company?

A. No, from the Steel; we buy from some of their constituents.

Q. Including what you buy from Carnegie, would it be in the neighborhood of 70 per cent.?

A. 65 I should say would be nearer; probably 55 from the American Steel & Wire, and 10 per cent. from Carnegie.

Q. In the 10 per cent. from Carnegie, are you speaking of a little different product than the wire rods?

A. Yes, I presume it is what Carnegie would call strips.

Q. Is it called bar iron, too?

A. No, it is flat; a bar is round, and a strip is flat.

Q. Flat strips?

A. It is in coils, but it is flat.

Q. That is the only name you know for it?

A. Yes.

Q. Is it steel?

A. It is a hoop.

Q. Is it the kind of product that would be manufactured by a hoop company, if you are familiar with that?

A. Yes.

Q. Mr. Severance asked you a question to get at the size of your business, Mr. Goddard, and I would like to ask you a question in order to get at the relative size of your business in wire manufacture, in point of view of tonnage, as compared with the American Steel & Wire Company?

A. I do not know.

Q. Just a moment; I haven't finished the question. Assuming that the American Steel & Wire Company manufactures over 60 per cent. of the wire tonnage in wire products in the United States, taking wire products as a whole, would your company in tonnage manufacture more or less than about 1 120 of the tonnage manufactured by the American Steel & Wire Company?

MR. SEVERANCE: May I have that question read?

(The question was repeated by the stenographer.)

THE WITNESS: I should have to figure that out.

By MR. COLTON:

Q. Suppose you do that, and tell us about it.

A. While I know what statistics show of the entire wire business of the country, I should have to figure out what 60 per cent. of that was.

Q. What per cent. do you manufacture of the entire business of the country?

MR. SEVERANCE: Just a moment. I object to this as without any foundation. "The statistics of the country" is a very ambiguous expression; I do not know what it means, and I object to the question as indefinite, not cross examination, and also immaterial, as being based on tonnage.

By MR. COLTON:

Q. (Continuing) Will you answer the question, basing

your percentage on tonnage, what percentage of the total output of the country you produce?

A. In tonnage, about one-half of one per cent.

Q. Now, if the American Steel & Wire Company, assuming that manufactures 6 per cent. you manufacture about 1/120th as much as the American Steel & Wire Company?

A. You mean 60 per cent., not 6.

Q. 60 per cent, yes.

A. Well, about one per cent. we would manufacture.

Q. One per cent. as much as the American Steel & Wire Company on that assumption, is that what you mean?

MR. SEVERANCE: I object to that as immaterial.

THE WITNESS: That is correct. If they make 60 per cent. and we make one-half per cent. of the whole thing, and they make 60 per cent. of the whole thing, we must naturally make a little over one per cent. of the American Steel & Wire Company.

By MR. COLTON:

Q. That is a matter of calculation anyway?

A. Yes; to be exact 1.20.

Q. One-half into 60 per cent., it is a matter of arithmetic, isn't it, 1/120th?

A. Yes, in round numbers.

Q. I would like the answer to my question if it would not be 1/120th as much as the American Steel & Wire Company, if you can figure that out.

MR. SEVERANCE: That is objected to. There is no foundation laid to the question.

THE WITNESS: I should say one per cent.

By MR. COLTON:

Q. As much as the American Steel & Wire Company?

A. Yes.

MR. COLTON: That is all.

RE-DIRECT EXAMINATION

By MR. SEVERANCE:

Q. Mr. Goddard, where did you get your statistics upon which you are basing your statement?

A. From the United States Department of Commerce and Labor.

Q. When?

A. The last report that was out in 1910.

Q. When did you find that?

A. It was sent to us within six months.

Q. And you brought that with you when you came?

A. Just some extracts from it.

Q. And that showed that your concern manufactured one-half of one per cent. of the total tonnage in steel wire products?

A. No. This is a summary of the whole country and I got my percentage from our proportion of the entire country.

Q. From what source did you secure the average prices of wire rods from 1901 to 1913?

A. From our own records.

Q. You brought those figures with you?

A. Yes.

Q. Now, when you say the average price for 1901 was $35.50, do you mean that the prices did not fluctuate at all during the year, or do you mean that was what it figured out at the end of the year?

A. That is what it figured out at the end of the year. It did fluctuate. It fluctuates every year.

Q. It fluctuates every year?

A. It fluctuates every month.

Q. Now, you stated in answer to counsel that the prices made by the different manufacturers of wire rods were substantially the same. You did not mean to testify that they were absolutely uniform, did you?

A. Not at all.

Q. You mean that the fluctuation was not wide; the difference I mean was not wide?

A. Not wide.

Q. You stated, Mr. Goddard, that for 1912 your average price was $25.50. Now, carrying out the excellent example of my friend in having you do some computations, if the average price in 1901, the year the Steel Corporation was formed,

was $34.50, the average price in 1912 was $9 less, was it not?

A. Yes, sir.

Q. Further carrying that out, if the average price the year the Steel Corporation was formed was $34.50, and in 1911 the year the suit was brought, was $26.35, the difference would be $8.15 less, wouldn't it?

A. Yes, sir.

Q. As a matter of fact, with the exception of the year 1903, has there been any year when the average price paid by you has been as high as it was in the year 1901, the year the Corporation was formed?

A. No.

Q. I do not know but what I misled you by that statement. You did state in 1907 it went up to $35?

A. Yes, but I said $36 in 1903.

Q. Yes.

A. Which is right.

Q. In 1901 it was $34.50?

A. Yes, sir.

Q. In 1903, $36.00?

A. Yes.

Q. And 1907, $35.00?

A. Yes.

Q. Outside of those years there has been no year when it has been higher than $34.00?

A. Yes, sir.

Q. That was fluctuating in 1906 from $31 to $34?

A. Yes, sir.

Q. Now, how do you buy your rods, do you buy them on a sliding scale based on pig iron, or how do you do it?

A. Based on pig iron, sliding scale.

Q. Then the price you paid for rods has been determined by the price of pig iron?

A. For the past four years.

Q. That is the price of pig iron plus the differential?

A. Yes.

Q. You stated that you buy 65 per cent., I think you said, from the Steel Corporation, 55 from the Steel & Wire and 10

per cent. from the Carnegie. How much of that 65 per cent. is bought on a sliding scale contract based on pig iron?

A. Fifty per cent., I should say.

Q. Counsel examined you at some length about the wide fluctuations in prices in the nineties, and the low prices in 1896 or 1897. Those were panic times, were they not, when everything was very low?

A. Yes, sir.

Q. And everything was having a great boom in 1900, was it not?

A. Yes.

Q. And still you found the average price paid by you in 1900, after the American Steel & Wire Company was organized, several dollars less than the year before, did you not, less than 1899? Did you not so testify in answer to Mr. Colton?

A. Yes.

Q. What is your annual tonnage of wire rods?

A. About 15,000.

Q. The prices that you paid for wire rods during these various years were ordinarily less than the prices quoted in the trade journals, were they not; less than the nominal market price quoted in the trade journals?

A. At times; and at times not.

Q. But at times they were?

A. Yes.

Q. It was a matter of negotiation between you and the person from whom you bought, was it not?

A. Yes.

Q. And you placed them where you could get the best price, the best delivery and the best quality?

A. Yes.

Q. Did the negotiations for your annual supply ordinarily continue over some little time? You would not not close at the first time they approached you with an offer, would you?

A. It would depend upon whether we needed them or not.

Q. You took bids from more than one person?

A. Yes; and as soon as they were in we closed it.

Q. You found those bids were varying?

A. Yes.

Q. And you closed where you could close to the best advantage?

A. Yes.

Q. As the trade runs, the contract that you have to let for tonnage of rods is regarded as a large and valuable contract, is it not?

A. I presume so.

Q. Yes. It is a large contract as contracts run?

A. Yes, sir.

Q. So that it is a class of contract on which manufacturers bid low as a rule, is it not?

A. Yes, sir.

Q. Was it your habit to let your contract for rods—I mean when you were not on the sliding scale basis—to the lowest bidder in price?

A. Not necessarily.

Q. What other considerations governed you at times?

A. Quality.

MR. SEVERANCE: That is all

MR. COLTON: I have a few more questions.

RECROSS EXAMINATION

By MR. COLTON:

Q. Did you prepare any statistics at the instance either of government counsel or counsel for the United States Steel Corporation?

A. No.

Q. Those memoranda, then, that you prepared, were simply for your own convenience?

A. Simply for my own convenience.

Q. In view of the fact that you had been called to testify in this case?

A. Yes; but I have them before me always.

Q. Some of those you had prepared prior to the time that you were called to testify in this case?

A. I have them always.

Q. You testified on direct examination that the prices as between the different manufacturers in the sale of rods were substantially the same?

MR. SEVERANCE: He did not say anything about it on direct examination. I did not go into the question with him.

MR. COLTON: I mean on cross examination.

THE WITNESS: Yes.

By MR. COLTON:

Q. And on the redirect examination by Mr. Severance you said there was some variation in price?

A. Yes, sir.

Q. Take the period prior to the time you began to purchase rods on the basis of pig iron: Would the variation between the different manufacturers be as much as fifty cents a ton?

A. Yes, sir.

Q. Would that occur often, that there would be a variation of as much as fifty cents a ton?

A. Yes.

Q. How much would it exceed fifty cents a ton?

A. There would be a difference of $2 at times.

Q. As a rule, though, would the variation be as much as fifty cents a ton?

A. Yes.

Q. Taking the period subsequent to the time you began to buy on sliding scale contracts, would the variation be as much as fifty cents a ton?

A. Yes.

Q. How about it as a rule?

A. It would be more than that.

Q. Would that variation partly be accounted for by a difference in quality?

A. No; not necessarily; they all mean to make the best they can. Some manufacturers make qualities better adapted for our purposes.

Q. Take the year 1901: From what different companies did you get bids in respect to your rod purchases?

A. That would be after the formation of the American Steel & Wire Company.

MR. SEVERANCE: After the formation of the Steel Corporation?

THE WITNESS: No; that is previous to the formation of the United States Steel Corporation.

MR. SEVERANCE: That is right. You mean the preceding fall. That is true——

THE WITNESS: At that time the Ashland Steel Company and the American Steel & Wire Company and John A. Roebling's Sons & Company would be the principal ones.

By MR. COLTON:

Q. Did you get bids from all of those companies at that time?

A. I cannot say at that particular time, but I know they were in the market.

Q. Do you have any recollection of having gotten bids from any one for that year other than the American Steel & Wire Company?

A. Yes; the Ashland Steel Company, I know, because we were buying more or less from them at that time.

Q. What percentage did you buy from the Ashland Company in the year 1901?

A. It would be impossible to say, without looking at my records.

Q. For the year 1902 from whom did you get bids?

A. The Ashland Steel Company; the Grand Crossing Tack Company. They were the principal ones.

Q. The American Steel & Wire Company?

A. Yes; we always bought from them.

Q. In buying from the American Steel & Wire Company did you not have an annual contract with them?

A. Probably.

Q. Over what period of time would that contract extend with the American Steel & Wire Company?

A. It would be for a definite amount of tonnage; and it might probably be not extending over one year.

Q. And you made a contract for a definite amount of tonnage?

A. Yes.

Q. A minimum tonnage to be taken——

A. To be taken as required.

Q. And you made those contracts about annually?

A. Probably.

Q. Did you have any such contract as that with any of the other companies?

A. Yes.

Q. For the year 1902?

A. I cannot tell.

Q. For any one of the years 1901, 1902 or 1903?

A. No; I cannot tell.

Q. You say you got a bid from the Grand Crossing Tack Company?

A. Yes; from the Grand Crossing Tack Company.

Q. That is located at Chicago?

A. Yes.

Q. That had a rod mill at Chicago?

A. At Grand Crossing.

Q. And they were going to ship rods into the east here?

A. Yes.

Q. Do you have any recollection as to what price they quoted you?

A. No.

Q. You have no recollection as to how much it differed from the price of the American Steel & Wire Company?

A. No.

Q. Did they quote you on the basis of Pittsburgh price?

A. Yes.

Q. Have the fluctuations been greater or less as between the different manufacturers since you took up the system of basing your price on the sliding scale according to pig iron?

A. Less.

Q. Why did you limit your business in 1901, 1902 and 1903 to those companies you have named?

A. I do not know as we did. Those are the only ones that I recall.

Q. And do you recall any other rod manufacturers in the country at that time?

A. Not from memory.

Q. Were they the principal makers, so far as you know?

MR. SEVERANCE: He says he does not remember any more. He does not know whether they were principal or subsidary.

By MR. COLTON:

Q. Take it in 1905: From what different companies did you solicit bids?

A. I should say from the American Steel & Wire Company; John A. Roeblings' Sons; the Ashland Steel Company, and the National Wire Company of New Haven.

Q. Is that all you recollect?

A. That is all I recollect.

Q. What became of the New Haven National Wire Company?

A. It was later merged into the United States Steel.

Q. About when was it merged into the United States Steel Corporation?

MR. SEVERANCE: One moment. That expression is a little inaccurate. I think the witness did not mean that. That concern failed, did it not, and its property was bought at a receiver's sale afterwards?

THE WITNESS: Yes.

MR. SEVERANCE: Then I object to it as already proven.

By MR. COLTON:

Q. Now, you spoke, after the formation of the American Steel & Wire Company, of the price having fallen. It rose and then fell, did it not, in wire rods?

A. Yes.

Q. And that fall was due to a cut made by the American Steel & Wire Company, was it not?

A. I can not tell what the causes were 12 years ago.

Q. But there was a very decided cut in the price of rods some time during the period of 1899 to 1901?

A. Yes.

(Whereupon a recess was taken until two o'clock p. m.)

AFTER RECESS.

JOHN E. LYNCH

was called as a witness on behalf of the defendants, and being first duly sworn, testified as follows:

DIRECT EXAMINATION.

By Mr. Reed:

Q. Where do you live?

A. In the town of Brookline, Massachusetts.

Q. Where is your place of business?

A. East Boston.

Q. What is your occupation?

A. Manufacturing boilers, tanks, general plate and sheet iron work.

Q. What is the name of your firm, your company?

A. The Hodge Boiler Works.

Q. And what office do you hold in that company?

A. Treasurer and general manager.

Q. Are you familiar with the purchases which that company makes?

A. Yes, sir.

Q. Particularly of steel material?

A. Yes.

Q. When was that company organized, Mr. Lynch?

A. In the year 1900 or 1901.

Q. Have you been familiar with its purchases of steel material since that time?

A. Yes, sir.

Q. What kind of steel supplies do you buy chiefly?

A. Boiler plate and boiler tubes, rivets.

Q. Do you buy any boiler plate from any of the subsidiary companies of the United States Steel Corporation?

A. Who are they?

Q. The Carnegie Steel Company or the Illinois Steel Company.

A. No, not now.

Q. How long since you have bought from those companies?

A. It is years. We never bought from the Illinois Steel. We have years ago bought a little from the Carnegie Steel Company, but it is a great many years ago, so long ago I do not remember the date of it.

Q. From what mills do you buy most of your plates?

A. The Lukens Iron & Steel Company of Coatesville; Worth Brothers of Coatesville; Central Iron & Steel Company of Harrisburg, Pennsylvania.

Q. They are all eastern plate mills, are they?

A. They are all in Pennsylvania.

Q. What kind of boiler tubes do you buy, Mr. Lynch?

A. Both steel and iron.

Q. Do you use welded tubing or seamless tubing?

A. All welded unless the other is specified, and I have no recollection of where we have had a specification for seamless tubing.

Q. What kind do you use, lap welded tubing?

A. Yes, it is all lap welded.

Q. About how much in dollars or in tons do your annual purchases of boiler tubes amount to?

A. I hardly know; $12,000 to $25,000 or $30,000 a year.

Q. $12,000 to $30,000 a year?

A. $12,000 to $30,000 odd a year.

Q. Do you buy boiler tubes from time to time or do you buy them on annual contracts?

A. Oh, we buy from time to time; sometimes on a contract, but not on an annual contract.

Q. You do not make contracts for so long a period as a year?

A. No, sir.

Q. When you are about to place an order or let a contract, do you ask quotations from different manufacturers of lap welded boiler tubes?

A. Yes.

Q. Will you name some of the companies from whom you ask quotations?

A. The Reading Iron Company, through their Boston agent.

Q. The Reading Company?

A. Yes, sir.

Q. And what others?

A. Sometimes the Tyler Tube Company of Washington, Pennsylvania; then the National Tube Company.

Q. Do you ever ask quotations from the Monongahela Tube Company?

A. Yes, we have; we have used their tubes.

Q. Has it been your custom since 1900 or 1901, when your company was organized, to ask quotations from more than one company in this way?

A. Yes, I think we always do when we are making a contract.

Q. Do the quotations that you receive from these manufacturers in reply to your requests vary in price or are they uniform?

A. They vary somewhat.

Q. About what range of variation will you get in the responses to any particular inquiries?

A. A variation of from two and a half to five per cent. on the discount.

Q. Has that same situation existed in the past?

A. Yes.

Q. Quotations have varied in the past, have they?

A. Yes, sir.

Q. Back as far as 1901?

A. Yes, long before that.

Q. Is there active, live competition for your business among the tube makers?

A. Yes, as represented by their agents in Boston.

Q. These companies have agents in Boston, have they?

A. Yes, except the Tyler.

Q. Except Tyler?

A. Yes; Tyler is not represented.

Q. Where are their agents?

A. I think they are in New York.

MR. REED: Cross examine.

CROSS EXAMINATION

By Mr. Dickinson:

Q. Have your works always been in Boston since 1901?

A. Yes, sir; East Boston, across the river.

Q. You are the treasurer and general manager?

A. Yes.

Q. How long have you been treasurer?

A. Since we organized; since December, 1900, or January, 1901, when we organized.

Q. Have you been general manager during that same time?

A. Yes; before that we were a company, a partnership.

Q. Then you went from a partnership into a corporation?

A. Yes, sir.

Q. And since the corporation was formed you have been treasurer and general manager?

A. Yes, sir.

Q. What have been your duties, speaking generally, as treasurer?

A. Always, from the first, I looked after the buying and the selling, and looked after the collections.

Q. Is it a large concern that you have?

A. Oh, no; we incorporated for $75,000.

Q. Did you have any assistance in looking after the buying?

A. I have a little now; but I always want to know, of course, what prices are.

Q. How long have you had assistance?

A. During the last three or four years. I am getting old now, and trying to make it a little easier for myself.

Q. I do not think you need have any apprehension on that score. You look hale and hearty.

Have you been giving exclusive attention to it during the last three or four years as you did before?

A. Not exactly; not quite. I get away for a few days now and then.

Q. Who has been giving you assistance in the last three or four years?

A. My son or one of the young men in the office.

Q. Take your son. What position does he hold?

A. He is president of the company.

Q. Nominally the president outranks the general manager and treasurer, does he not?

MR. REED: You are not going into a question of parental discipline, Judge, are you?

MR. DICKINSON: I suppose he is not jealous, if it is all in the family.

THE WITNESS: I try to be on deck, sir, all the time.

By MR. DICKINSON:

Q. But sometimes you are away?

A. Yes.

Q. Do you go away on journeys to any extent?

A. I have been away a month or six weeks at a time.

Q. Do you take pleasure trips?

A. Yes.

Q. Do you ever go abroad?

A. Yes, sir.

Q. Have you been abroad in the last three or four years?

A. In 1911 I was abroad for about six weeks.

Q. Then do you go to different parts of this country at various seasons?

A. Not very much. I have been to the coast once.

Q. You mean the Pacific coast?

A. Yes.

Q. Do you go to the seashore?

A. No; I stay at the shop pretty closely in the summer time when we are busy. These trips I make are in the winter season, when there is not much doing.

Q. How frequently do you make these trips? Do you make one or more trips every year?

A. No; I cannot say that I do. I was away one month last winter.

Q. Your son, you say, has rendered you assistance in the last three or four years in the matter of buying; as president, has he the power to make purchases?

A. Yes; he has the power to make prices for work.

MR. REED: That was not what the Judge asked you, Mr. Lynch. I suggest that you speak a little louder, Judge.

By MR. DICKINSON:

Q. I said: Has he the power to make purchases?

A. Oh. Yes; if anything is wanted that we have to buy.

Q. And has he made purchases during that time?

A. Yes; he and the young man in the office with him.

Q. I suppose you have confidence in their judgment and discretion?

A. Oh. yes, of course; if there is anything to buy they would call up the different agents and get their prices.

Q. Sometimes he does that, does he?

A. Yes; when I am not there.

Q. Sometimes when you are there, does he?

A. No; when I am there I attend to it.

Q. But when you are not there your son does make purchases?

A. Well, if anything is wanted, and wanted before I get back, he would purchase it; he and the young man in the office; they confer.

Q. Come to the year 1901. That being about the year you were organized, the first year after you were organized; what amount of boiler tubes did you buy in that year, approximately?

A. I can not tell you without referring to the invoices or the books.

Q. What else did you buy besides boiler tubes in the way of steel?

A. Plates and rivets.

Q. Can you approximate the quantity of plates and rivets that you bought in that year?

A. No, sir; I can not.

Q. You can give no approximate idea of the tonnage or value?

A. No, sir; I could not.

Q. Do you know the times at which you made those purchases during that year?

A. Oh, no.

Q. You can not give that?

A. No.

Q. Can you give the persons from whom you bought during that year? I mean, do you have any recollection, do you carry in your mind any recollection of a distinct transaction that you made that year?

A. No, sir; not one. I do not.

Q. Do you carry in your mind the question of what bids were made, who made the bids, on these various purchases for that year, and what the variation was in them?

A. No, sir; I could not tell you, sir.

Q. Come down to the year 1902: Could you tell me about that year, and what purchases you made, from whom you made them, the quantity and the price, and the bids, and the variation of bids?

A. No, sir; I could not very well.

Q. Take 1903: How about that year?

A. I would make the same answers.

Q. How about 1904?

A. The same.

Q. How about 1905?

A. The same.

Q. How about 1906?

A. The same answer.

Q. And 1907?

A. The same answer.

Q. And 1908?

A. The same.

Q. 1909?

A. Yes.

Q. 1910 and 1911?

A. I would say the same.

Q. Now, when you spoke of live competition, were you speaking of the present time, among the agents of these various companies?

A. Yes, there is competition.

Q. Are you speaking of the present time when you use that expression?

A. Yes, it has always been.

Q. But you can not come any nearer, you can not give any nearer details than you have given in respect to the years about which I have asked you?

A. I know there was always competition.

Q. That is, people seeking your business?

A. Oh, yes.

Q. Don't you know that at times, especially back prior to 1910, there were long periods of time when the prices were pretty nearly constant in plate and tubes?

A. For how long?

Q. For months at a time.

A. Yes, for months, but not for a year.

Q. I do not say a year, but for months at a time there would be a constant price, where there would be no variation, would there not?

A. Yes, things would be booming and prices would be held up.

MR. DICKINSON: That is all.

LOUIS J. HOROWITZ

was called as a witness on behalf of the defendants, and being first duly sworn, testified as follows:

DIRECT EXAMINATION.

By MR. LINDABURY:

Q. Where do you live?

A. 190 Riverside Drive.

Q. What is your business?

A. President of the Thompson-Starrett Company.

Q. How long have you held that position?

A. About four years.

Q. Were you with that company before that time?

A. Yes.

Q. For how long a time?

A. Six years—about ten years altogether.

Q. What is the business of that company?

A. Building construction.

Q. Where does it carry on that business?

A. At present principally east of the Mississippi River.

Q. I presume a large part of their business is in the metropolitan district?

A. Yes.

Q. About how large is your business?

A. We have at present about $36,000,000 worth of work on construction.

Q. You call that a fairly large business, I suppose, would you not?

A. We would not mind having it larger.

MR. DICKINSON: Does he mean that he does that much a year?

THE WITNESS: No, we do not finish that much. We finish about $15,000,000 to $20,000,000 worth. We have that at present on our books.

By MR. LINDABURY:

Q. And you finish about how much a year?

A. Well, it varies; sometimes we finish $10,000,000; sometimes $12,000,000 or $15,000,000 or $18,000,000. There is no fixed amount.

Q. Is there any concern in this country doing a larger business in your line than you, so far as you know?

A. Not that I know of at present.

Q. Have you built any of the large buildings in the City of New York in recent years?

A. Yes.

Q. Name some of them, will you, please?

A. We are building at present the Municipal Building in the City of New York; we are just about finishing the Woolworth Building. We built the McAplin Hotel, and we are building the Equitable Building.

Q. That is the new Equitable on the site of the old Equitable Life Assurance Company building?

A. Yes. Those are the largest ones I can think of.

Q. Have you built any large buildings out of New York?

A. Yes.

Q. You may name some of them.

A. We are building at present the Continental and Commercial Bank Building in Chicago, the Field Museum in Chicago, the Conway Building for the Marshall Field Estate, and in Pittsburgh we are building the Baer-Kaufman dry goods store.

Q. That will do. Can you tell me how much steel you use in your business?

MR. DICKINSON: You mean per year?

MR. LINDABURY: Per year or in any other way he can give it.

THE WITNESS: I have a memorandum prepared of the steel we bought during the last four years, steel that we have bought and erected, and it aggregates 178,000 tons.

MR. DICKINSON: That is in four years?

THE WITNESS: Yes.

By MR. LINDABURY:

Q. Have you that distributed among the four years?

A. No. I have it distributed among the different people from whom we bought it.

Q. Never mind that; can you tell how nearly evenly it was distributed throughout the four years; I mean just from memory?

A. I think the last two years were heavier than the first two years.

Q. Has the increase been gradual?

A. No, we happened to have our largest jobs in the last two years.

Q. About what proportion of that was purchased within the last two years, about what percentage of the 178,000 tons?

A. I should say 65 per cent.

Q. Do you fabricate your own steel or buy it already fabricated?

A. We buy it fabricated.

Q. Do you purchase any of that from any subsidiary of the United States Steel Corporation?

A. Yes; a great deal of it.

Q. From whom do you purchase it?

A. The American Bridge Company.

Q. What percentage of that was purchased from the American Bridge Company?

A. About 85,445 tons from the American Bridge Company.

MR. DICKINSON: Out of what amount is that?

THE WITNESS: Out of the total.

MR. LINDABURY: 178,000 tons?

THE WITNESS: Yes.

By MR. LINDABURY:

Q. That leaves how much purchased from others?

A. 92,000 tons and some odd.

Q. From whom did you make these other purchases, if you happen to have the names there?

A. From a number of concerns.

Q. Will you name them?

A. Jones & Laughlin and the Bethlehem Steel Company.

Q. Have you the tonnage bought from each?

A. Yes.

Q. Give it.

A. I have not segregated it.

Q. Never mind it, then. Who was the concern from which you made the next largest purchase after the American Bridge Company?

A. The largest individual concern was the Pennsylvania Steel Company.

Q. You named the Bethlehem and Jones & Laughlin?

A. Yes.

Q. Any others?

A. Yes; we bought from the Fort Pitt Bridge Company; from the Eastern Steel Company; from Milliken Brothers; from the Baltimore Bridge Company; from Hay Foundry & Iron Works; McClintic-Marshall Company; Brown-Ketchum Iron Works; Cambria Steel; Hansel-Elcock Company. Do you want any more?

Q. No. There were a number of others, were there?

A. Some small ones.

Q. I think that will do. Were your purchases from the American Bridge Company made chiefly in one year, or were they distributed with a fair amount of evenness over the four years?

A. I think they run about the same.

Q. Were those purchases made by you on a competitive basis or not?

A. Generally on a competitive basis.

Q. When were they not?

A. Very often we select a sub-contractor or a shop that we think is peculiarly situated to make a favorable price, and we have our own ideas as to values, and we take up negotiations with such sub-contractors, and if our ideas of value are good, we are apt to close a contract without getting competitive figures.

Q. Do you keep familiar with price conditions?

A. Yes, we keep familiar with price conditions, and we also feel that we know the cost of fabricating.

Q. What percentage of your purchases are made upon what you term a competitive basis?

A. I should say two-thirds.

Q. How is that competition obtained?

A. We ask various concerns to make quotations on the steel for a specific building in accordance with drawings prepared in advance.

Q. From a remark you made a little while ago, I take it that your purchases are for the most part made for each job separately?

A. Oh, yes; always.

Q. That is the universal practice, is it?

A. It is with us.

Q. Now, tell us whether or not the quotations which you have received in answer to these requests for competitive bids have been variant or have been uniform.

A. You mean as between competitors?

Q. Yes.

A. They vary some.

Q. How long has that been the case?

A. We have never had figures for steel coming in from a number of concerns that were exactly the same figures. There was always a variation; sometimes more and sometimes less.

Q. Have you had personal charge of those purchases?

A. Yes, sir; the largest jobs I usually negotiate myself; the smaller ones I keep in touch with the figures. I see the bids.

Q. Do you make the contracts in any case when the negotiations are ended and contracts given out, do you have anything to do with the execution of them?

A. I fix upon the terms of the contract; our contract agent does the physical signing.

Q. Do you do that formally?

A. On all the large jobs.

Q. Have you had to do with purchases for your concern during all of the last ten years?

A. No.

Q. For what length of time have you been familiar with the purchases and the prices paid?

A. For about five or six years.

Q. And before that what was your duty for your company?

A. I just concerned myself with the financial affairs of the company.

Q. Didn't you until five or six years ago know what prices were ruling or were being paid?

A. I paid no attention to that branch of the business; I did not concern myself with the construction end of it.

Q. So it is for five or six years that you have intimate knowledge of price conditions and purchases?

A. Yes, sir.

Q. Has there been any time during that period that you were having connection with these purchases when there has not been free competition in the sale of the fabricated steel which you purchased?

Mr. Dickinson: This is objected to because it calls for a conclusion of the witness, and also because the witness is not qualified to give an opinion on that subject.

A. There has not, so far as I have been able to observe.

Q. Have you observed during that time any indication of a combination between the sellers of fabricated material as to prices?

MR. DICKINSON: This is objected to on the same ground.

THE WITNESS: I have not.

By MR. LINDABURY:

Q. Have the prices of fabricated material varied from time to time?

A. Yes sir, they have.

Q. During the whole period of five or six years has that been the case?

A. It has; varied at different times?

Q. That is what I mean, at different times.

A. Yes.

Q. And I understood you to say it has varied at all times as between the manufacturers?

A. Yes, in various degrees.

Q. Sometimes more?

A. And sometimes less.

Q. Could you give us any idea of the times when the variation has been greatest or when it has been least?

A. When there was a dearth of work the variation was the greatest. When things are prosperous the variation is the smallest.

Q. What has seemed to you to be the chief influence leading to variation in these quotations?

A. The law of supply and demand.

Q. And as manifested how in these particular cases?

A. When the fabricating shop had little or no work in that shop, in its anxiety to get a job it would make a lower figure for fabricated steel to be delivered than another which had a tonnage in the shop to work on.

Q. And I suppose the amount of contracts that each has is apt to vary from time to time?

A. Oh, yes.

Q. One is full sometimes and another at other times?

A. Yes.

Q. Has that anything to do with your practice pursued in certain cases of contracting with a particular shop without asking for competitive bids.

A. Yes, sir.

Q. What has it had to do with it?

A. For instance, if we happen to know that the Bethlehem Steel Company is slack on orders, why, we are apt to take up an order with them and find out how much per ton they would deliver a specific job for; if we happen to know that the Eastern Steel Company shops were slack we would take it up with them, and if we happened to know that the American Bridge Company needs work we are apt to take it up with the American Bridge Company, but we always aim to take up our contracts with the shops that need the work, feeling that that would influence the quotations.

Q. And have you found whether or not it does influence their quotation in practice?

A. Generally; not always.

Q. And that is the reason of your pursuing that course?

A. Yes.

Q. Have you found it to be of any advantage in your trade that there should be a concern of the large capacity of the Bridge Company supplying structural material?

A. On large jobs, yes.

Q. Why? What has been the advantage?

A. On jobs requiring from 10,000 to 25,000 tons each, there are certain classes of work that no one shop's capacity is capable of turning out on time. The American Bridge Company is in a position to divide its work in two or three or four, and once in a while among five plants; the material being made in five plants, we get better deliveries than we would from any one plant.

Q. Has the American Bridge Company ever refused to supply your wants because you were not giving it your exclusive business, or as large a percentage of your business as it thought you ought to?

MR. DICKINSON: I object to that. There is no evidence to show that any representations were made to the witness as

to what they thought, or any such proposition as that ever being brought up to him. We object to it as irrelevant and incompetent.

By Mr. Lindabury:

Q. What is your answer?

A. You asked whether the American Bridge Company has ever refused to sell us any steel because they felt that they were not getting all or a proper proportion of our business?

Q. Yes.

A. The answer is no.

Q. Have you ever found the American Bridge Company unfair or secret or oppressive in its methods of doing business?

Mr. Dickinson: This is objected to as calling for a conclusion of the witness, and his opinion upon an unrevealed state of facts.

The Witness: I have not.

CROSS EXAMINATION

By Mr. Dickinson:

Q. You say that for the last two years you have bought about 65 per cent. of your purchases——

A. Sixty-five per cent. of the total.

Q. From the American Bridge Company?

A. No.

Q. From what?

A. Sixty-five per cent. of the total of 170,000 tons, I think, was bought in the last two years, sir. In other words, our purchase of tonnage has been heavier in the last two years than it was in the two years previous. I should say that the percentage as between the American Bridge Company and all the other sub-contractors has been about the same throughout the four years.

Q. You have given the percentage for the last two years as being about 65 per cent. of your entire purchases?

A. Sixty-five per cent. of the 170,000 tons.

Q. 178,000 tons you said.

A. Whatever I gave.

Q. Sixty-five per cent. of that total you bought from the American Bridge Company?

A. I did not say that.

Q. Did you not say that?

A. No; I said 65 per cent. of the total tonnage was bought in the last two years.

Q. I misunderstood you. That 178,000 tons was the tonnage for four years?

A. The total tonnage we bought in the last four years.

Q. Sixty-five per cent.—more than half of it—was bought in the last two years?

A. Yes.

Q. What percentage of that during the last year was bought from the American Bridge Company?

A. I will figure it out for you if you want me to. I believe the percentage is about the same.

Q. What is that?

A. Well, a little less than half.

Q. Will you figure that out?

A. Yes. (After calculation.) About 66,598 tons from others than the American Bridge Company; 65,512 tons from the American Bridge Company.

Q. In what year, now?

A. The last two years.

Q. Now, give the two years before that.

A. 25,775 from others; 19,933 from the American Bridge Company.

By Mr. Dickinson:

Q. What do you call the last two years? Give the dates.

A. The summer of 1911 until the summer of 1913.

Q. And the preceding two years it would be a corresponding period?

A. Yes.

Q. Your recollection goes back about six years, does it?

A. Two years before that.

Q. Two years before what?

A. Two years before the period with which these figures deal.

Q. Before that what proportion was given to the American Bridge Company?

A. I should say about the same, but I am not as positive about that as I am about these figures.

Q. Is it not a fact that before you got jurisdiction of the matter a larger percentage was given to the American Bridge Company?

A. It may be, but not that I know of.

Q. Don't you know that your predecessor gave them a larger percentage than you did?

A. I know that when I came there, during the first years I came with the company, on account of Mr. Starrett's relations with Mr. Hatfield, the American Bridge Company had a much larger percentage of our business in those years than it has had subsequently.

Q. How far back does that run?

A. That was before I assumed any active management of our company. I should say from 1904 to 1907.

Q. And you had nothing to do with awarding contracts then and no knowledge of prices?

A. No, sir.

Q. You stated that a certain part of your business was given to selected shops?

A. Yes.

Q. In this paper which you have used, have you separated those different classes, that which was given to selected shops from time to time, and that which was given on contract?

A. I can tell you from my knowledge of the different transactions.

Q. Do you mean to say that from your recollection you can tell for the last six years for each year what proportion of your work was on contracts and what proportion was given to selected shops from time to time?

A. No; I do not say that.

Q. Well, can you say? Take the first year of your jurisdiction, would that begin in the summer and go to the following summer?

A. I have not given you any information on the two years as to the quantities of steel.

Q. Back of four years?

A. Back of four years.

Q. But could you give the percentage of your requirements for any one of those years that was purchased by selection of shops and what percentage was done under contracts and bids?

A. I can give you all the large jobs that we closed without competition.

Q. I am not speaking of the large jobs. What do you mean by large jobs; you mean buildings you are doing?

A. Jobs involving a tonnage of 3,000 to 4,000 or more.

Q. Does it not sometimes happen on a large job that a part of the tonnage would be on contracts and a part from selected shops?

A. No; we always let each job as a whole to one concern.

Q. To some one concern?

A. Yes, sir.

Q. That is to say, that in building one building you never at any time divided the purchases of your structural material for that building, but always gave that in one contract?

A. Yes, barring some odds and ends that we might want to pick out of stock, emergency pieces; but the contract requirements are generally bought from one shop for the job.

Q. Can you give for any one year an estimate of the percentage of your requirements that was done by getting it from selected shops for the work, and what percentage for any one year was gotten under contract?

A. What percentage was gotten under competition, I suppose you mean? They were all under contract, you know.

Q. Then I will put it under competition, where you took bids?

A. Over two-thirds of our work is always sublet in competition; the other part I should think we have closed without competitive figures.

Q. That is to say, about one-third?

A. Yes; that would be a generous estimate.

Q. Would that be a general statement applying to all the years?

A. You mean since I had to do with it?

Q. Yes.

A. I think probably it was less than before. The more I had to do with steel, and the more familiar I became with conditions, the more willing I was to close contracts without competitive figures, because I relied more on my own judgment than on information obtained from figures.

Q. Take the last year you mentioned there; what proportion of that was closed without taking competitive bids?

A. When you speak of last year, you mean from the summer of 1912?

Q. What you call the last year, yes.

A. The only job we took without competitive bids was the Baer-Kaufman dry goods store in Pittsburgh.

Q. You stated a while ago, did you not, that as you became more experienced in the business and better acquainted with conditions, and relied more on your own judgment, the percentage of business that you gave out without competitive bids was larger, as compared with preceding years?

A. It was larger; that is right.

Q. Now take the year before that. What percentage for that year was given out on contracts without taking competitive bids?

A. 16,000 tons.

Q. 16,000 tons?

A. Yes, sir.

Q. You mentioned the last year one particular contract, you said it was the Baer-Kaufman store; what was the amount of tonnage for that?

A. 6,721.

Q. What percentage was that of your consumption for that year?

A. It is about 10 per cent.

Q. Then that would make about 60,000 tons?

A. Yes; I have got 131,000 tons for the two years, and I figure it is about evenly divided the last two years.

Q. Now, then, take the year before the last year: What percentage of your contracts for that year were given out without competition?

A. I should say about 30 per cent.

Q. Now, take the year before that: How much was given out without competition?

A. About 4,000 tons.

Q. What percentage would that be?

A. I will have to figure again.

MR. LINDABURY: Still 10 per cent.?

THE WITNESS: No, because we did not buy as much steel during the first two years as we did the last two years.

MR. DICKINSON: Let him figure it.

MR. LINDABURY: All right.

THE WITNESS: Assuming that we bought one-half of the requirements for the two years in that one year, the percentage is as 4,000 is to 22,000, which would make it about 20 per cent. wouldn't it?

By MR. DICKINSON:

Q. I am leaving it to you to answer.

A. It is mathematics, you know.

Q. Well, you are better at that than I am.

A. All right.

Q. But that is a mere assumption that it was divided equally between those two years?

A. Yes. I have not got the dates here.

Q. You can get them?

A. Yes, I can get them.

Q. From your present recollection, you can not answer accurately?

A. No, sir.

Q. You have nothing beyond that, back of that?

A. No, sir.

Q. From what you have used here in giving this testimony —you have nothing back of that?

A. No sir.

Q. I understand, Mr. Horowitz, that as to these percentages which you have given you took no bids, there was no competition as to that, but you knew what you wanted and were willing to use your own judgment and put it direct with the shops you wanted it from?

A. Yes, sir.

Q. Now, go back to the first year that you were in business. I understand you have no figures there covering that?

A. I have for the first year of the four years.

Q. I understand. I am going back to the first year when you were president; that would be six years ago.

A. I did not become president until four years ago. You mean the first year when I became actively connected with the management of the business. I have been president of the company for four years and connected with the management of the business for six years.

Q. Yes; I stand corrected.

Have you undertaken to testify as to the conditions four years back or six years back as of your own knowledge?

A. I can give you just recollections; not as accurately as I can the last four years except that I know that eight or nine years ago the Thompson-Starrett Company bought a larger percentage of steel from the American Bridge Company than they bought in subsequent years.

Q. But take six years ago: Do you know the amount bought in that year?

A. The tonnage?

Q. Yes.

A. No; not definitely, I do not. I would have to figure that up.

Q. Do you know who had the contracts that year?

A. Except I should expect that they were about divided in the same way as these.

Q. That is just an expectation on your part?

A. That is all. In other words, six years ago I assumed the management of the company and at that time I established certain rules and regulations for the handling of the business; and I am giving my testimony concerning the period that I have had to do with the company, that I know about.

Q. That is, four years?

A. No; six years.

Q. Then I will ask you about that: Take it six years back, now: Have you any recollection of any contracts that were awarded that year, and the prices, or anything about the bids?

A. No; I have not. I would have to get the same statistics I have here.

Q. I am just asking what you remember now.

A. No.

Q. How about five years ago?

A. I cannot give you the details of anything back of the four years I have here.

Q. Going back four years, that is the first year covered by this paper?

A. Yes, sir.

Q. Can you state now during the first of those four years to whom contracts were awarded and what bidders there were on the particular contracts?

A. No.

Q. You do not know who the bidders were now?

A. Not now, here, no.

Q. That is what I mean,

A. No.

Q. Do you know anything about what the bids were?

A. You mean on these contracts that were let?

Q. For that year yes.

A. No; I cannot give you that.

Q. Nor what the variations in them were?

A. Not in dollars and cents no.

Q. Can you give it at all?

A. Approximately.

Q. Can you take any one of them now—I want you to speak from memory; can you take any one of them now and state the period that it was let, and the tonnage, and who bid on that and what the bids were for the first year covered by that paper?

A. I am trying to think of an important one, one that has made an impression on my mind.

The only one I can think of, Judge, the first year, was a contract that we let without competition.

Q. That was without competition?

A. Yes; I can give you the price at which it was let, and all that.

Q. I am not asking about those that were let without competition, but I am asking for that first year——

A. I do not know the details.

Q. Do you have any distinct recollection at all as to prices and who the bidders on any of these contracts were, and what the variation was?

A. I have a recollection, yes, but I can not give you the names of the people definitely, as to who bid and what the prices were.

Q. You mean you just have a general recollection that there were such bids let?

A. I know that we generally asked certain concerns to bid, and that the bids came in and that we let the contracts to the lowest bidder. I have the names of the bidders here to whom we let them, but I can not give you the details.

Q. You do not undertake to say that, in respect of any of these contracts, any particular one of them, some of the bids were not the same or approximately the same?

A. As between two concerns?

Q. Yes.

A. Oh, yes; they were sometimes approximately the same.

Q. Were they not sometimes the same?

A. I do not recall a single instance where we have received two figures of two concerns the same.

Q. Have you any distinct recollection about that one way or the other?

A. Yes, I have. I have a distinct recollection that there was a variation in all the bids that we received.

Q. There was a variation?

A. Yes.

Q. Can you name any contract for the first year, and name the bidders for that year?

A. No; not definitely.

Q. Can you do it for the second year?

A. Not definitely.

Q. How about the third year?

A. Yes, I think I could.

Q. As to how many of the contracts for the third year can you give the names of the parties who bid on the particular contracts?

A. I could just give you the large jobs and mention some

of the names, but I probably would not give you the complete list. I would not recall them.

Q. Could you give a full list of all the bidders on any contract?

A. Not from memory, no.

Q. Were those bids on those contracts lump sum bids or bids per ton?

A. Almost invariably per ton.

Q. But sometimes they were the other way, were they?

A. In small jobs once in a while they were lump sum contracts.

Q. You said that you personally negotiated large jobs within the last four years, and you fixed the terms, but the contracts were actually made by others; but were there not some jobs for every one of those years in which you did not personally negotiate, and which you left to subordinates in whom you had confidence?

A. Yes.

Q. Could you state what percentage in volume that amounted to?

A. I could figure it up. I only myself personally negotiated the large jobs.

Q. But you had a great many jobs, did you not, each year?

A. Oh, yes.

Q. And while there would be a number of jobs which of themselves would not amount to much, taken together the aggregate would be a good deal?

A. A very large tonnage.

Q. And a great deal of that you left entirely to others, did you not?

A. I left the negotiations to others. You understand the bids were submitted to me, and I discussed the prices, but I did not personally talk to the salesmen or to the fabricating manager, or whoever we happened to deal with.

Q. Do you personally supervise all of the bids on all of purchases of structural material, no matter how small the matter may be?

A. The structural material and everything else, Judge. We have an administration committee, and all of the bids for all the lines of work come before us in tabulated form for advice and recommendation.

Q. And yet you can not give, for any one of those four years, now, any statement as to who the bidders were on any particular contract, or what the variation was in their prices?

A. I could not give you the names of all the bidders, nor the exact variation of prices.

RE-DIRECT EXAMINATION

By Mr. Lindabury:

Q. Which in its requirements of steel is the largest building that you have put up during the last four years?

A. The Municipal Building.

Q. What was the amount?

A. That took 25,334 tons.

Q. Was that steel purchased on competitive estimates or bids?

A. Competition.

Q. Do you remember who estimated on that?

A. Yes.

Q. Will you tell the names of the principal concerns?

A. The Pennsylvania Steel Company; the American Bridge Company; the Eastern Steel Company, and the Bethlehem Steel Company are those that I remember.

Q. Which was the lowest bidder?

A. The Pennsylvania Steel Company.

Q. Which got the contract?

A. The Pennsylvania Steel Company.

Q. What were those rules and regulations which you said you established, apparently of a reformatory character, when you assumed charge of the business?

A. Simply that we wanted competition, and no friendship between the officers and those from whom we bought.

Q. Was that a cardinal principle that you inaugurated then?

A. Yes; that was a cardinal principle that we inaugurated, and the one that we advertised as our policy.

Q. Have you lived up to that ever since?

A. Yes, indeed.

Q. In small things as well as in large?

A. Yes, sir.

Q. Has that been the principle upon which you have made all these purchases for the last six years?

A. Yes, sir; absolutely.

Q. And the Bridge Company apparently has been able to meet those high requirements about half the time?

A. That is what the figures show.

Q. Who else has met them sometimes in the larger contracts? McClintic-Marshall, I see, sometimes?

A. McClintic-Marshall sometimes sold us steel; Bethlehem sometimes sold us steel; Jones & Laughlin sometimes sold us steel. I have named the sub-contractors before.

Q. Yes. They have all, then, been able to come up to the level required at times?

A. They have been able to make prices, yes, sir.

Q. They make prices

A. Yes.

Q. Take the Woolworth Building. I think the American Bridge Company got that, did it not?

A. Yes.

Q. What was the steel required there, the tonnage; you have it on that paper.

A. About 23,000 tons, I think.

Q. Less than half as much as the Municipal?

A. Oh, no, no. It was 23,341 tons, about 2,000 less.

Q. And what was the Municipal?

A. 25,334.

Q. They are two of the largest buildings that have been put up in this country, are they not?

A. Yes.

Q. How did the American Bridge Company get that?

A. They made the right price.

Q. In competitive bidding?

A. No.

Q. How were you able to get the right price out of them, then?

A. Mr. Farrell and Mr. Hatfield were anxious for the job and made the price.

Q. And I suppose they made it right?

A. We thought so and Mr. Woolworth thought so, too. I will tell you, here is a case in point: that Woolworth steel without competition cost $9 a ton less than from the Pennsylvania Steel Company with competition. That was my explanation for sometimes letting the steel without competition.

MR. LINDABURY: You apparently know how to carry on your business, and I have no more questions.

THE WITNESS: Thank you.

RE-CROSS EXAMINATION

By MR. DICKINSON:

Q. The American Bridge Company, you say, made a contract with you at $8 per ton less than you got in competition?

A. $9 a ton less.

MR. LINDABURY: No.

By MR. DICKINSON:

Q. What did you say?

A. I said the price for the Woolworth Building was $9 a ton less than the Municipal Building, which was awarded in competition. The Woolworth Building was let without competition.

Q. That is exactly what I said, that you got from the American Bridge Company, without taking bids, the tonnage at $9 a ton less than when you took bids.

A. That was on another job.

MR. LINDABURY: Your question would seem to imply on the same job.

MR. DICKINSON: No; I did not mean that; it was related to what had gone before.

By MR. DICKINSON:

Q. When you put in that rule that characterized your administration you did not do it just for mere idle pastime, did you?

A. No.

Q. Before that the American Bridge Company had been getting a larger percentage than they got afterwards, hadn't they?

A. The rule was not introduced specifically with relation to the American Bridge Company.

Q. I understand, but I am just asking for facts.

A. The facts are that I considered that Mr. Theodore Starrett was very friendly with Mr. Hatfield, and very often he awarded contracts perhaps unconsciously, due to that friendly relation, rather than on a strict business basis.

Q. Who is Mr. Hatfield?

A. Mr. Hatfield is president of the American Bridge Company?

Q. Were McClintic and Marshall capable of taking a job as big as the Municipal Building or as big as the Woolworth Building?

A. It depends on the time. Any of those shops could turn out the tonnage in some time, but it depends upon the time. McClintic-Marshall or the Pennsylvania Steel, or any one shop of the American Bridge Company could not turn out the steel for the Woolworth Building within the time that the several plants of the American Bridge Company turned it out. I will not say that they could not; I say that they would not turn it out in the same time.

Q. So that the American Bridge Company, by having a number of shops, has an advantage over its competitors by being able to turn out a job in a more satisfactory way in point of time?

A. Yes, we believe so.

By Mr. LINDABURY:

Q. I suppose the larger the concern is the larger job it can turn out ordinarily?

A. Oh, yes.

Q. And as to this friendship, I suppose that the manufacturers cultivate the friendship, as much as they fairly can, of the consumers?

A. Yes, we do the same thing with people that are our consumers, or people that contract with us.

Q. That habit is more or less universal in this world, is it not?

A. Yes.

MR. LINDABURY: That is all.

PERCY F. HOGAN

was called as a witness on behalf of the defendants, and being first duly sworn, testified as follows:

DIRECT EXAMINATION

By MR. LINDABURY:

Q. Where do you live?

A. Montclair, New Jersey.

Q. What is your business?

A. Steel.

Q. Where is your business carried on?

A. 373 Pearl Street.

Q. Have you a firm or corporation or what?

A. Firm.

Q. Are you a jobber in steel?

A. Jobber.

Q. What kind of steel do you handle?

A. We handle tool steel, sheet steel, flat wire, alloy steels, some wires.

Q. Can you give us an idea of the tonnage you handle a year?

A. About 5,000 tons.

Q. Where do you get it?

A. All domestic; numerous manufacturers, some from the constituent companies of the Steel Corporation, some from other mills.

Q. I think I did not ask you how long you had been carrying on this business?

A. Thirty-five years.

Q. During the last ten years what percentage have you bought from the subsidiaries of the Steel Corporation, about?

A. Roughly, about 25 per cent.

Q. Has there been any one of these articles that you have bought in larger quantities than that from a subsidiary of the Steel Corporation?

A. Yes, what is known as flat wire.

Q. Where do you get that?

A. We get that from the American Steel & Wire Company and other outside companies.

Q. What percentage of your purchases of that flat wire have you gotten from the American Steel & Wire Company?

A. About 20 per cent.

Q. What is flat wire? I am not sure that I know.

A. Flat wire is a round-edged strip of cold-rolled material that has been first hot rolled, then the scale taken off, and then cold rolled.

Q. What is it used for?

A. It is used for manufacturing different kinds of hardware, and all sorts of things. It enters into a thousand and one different things.

Q. How much of that do you use a year?

A. About 1,500 tons.

Q. And you get about 20 per cent. of that from the American Steel and Wire Company?

A. Yes, sir.

Q. How long have you gotten that percentage?

A. It is pretty hard to say exactly, but we have been buying more or less of that kind of material from the American Steel & Wire Company ever since the formation of the Steel Corporation.

Q. Has the amount varied?

A. It has varied, yes.

Q. Within what limits; have you ever got as much as 30 per cent of it a year, for instance?

A. It is quite possible, but I do not think so.

Q. Sometimes less than 20 per cent?

A. Sometimes less than 20 per cent.

Q. Where do you get the rest of it?

A. Get it from the Spencer Wire Company of Worcester, Massachusetts; quite a considerable tonnage from the Ameri-

can Tube & Stamping Company, Bridgeport, Connecticut. We have got, up to a short time ago, quite a lot from the Morris & Bailey Steel Company, Pittsburgh.

Q. What is the largest article you handle; what is the article that you handle the greatest quantity of?

A. I believe flat wire is the largest.

Q. What next?

A. A special grade of sheet steel.

Q. Where have you bought that?

A. The Allegheny Steel Company.

Q. Altogether?

A. Altogether.

Q. Never bought any of that from any subsidiary of the Steel Corporation?

A. No, sir.

Q. Nor anybody else?

A. No, sir.

Q. What is the next thing?

A. Tool steel.

Q. Do you handle considerable of that?

A. Considerable.

Q. Where do you get it?

A. The Crucible Steel Company of America. We got it up to about three years ago, and then we transferred to the Halcomb Steel Company.

Q. Where is that?

A. Syracuse, New York.

Q. Did you ever buy any of that from Carnegie?

A. No.

Q. Or any of the subsidaries of the Steel Corporation?

A. No, sir.

Q. What is the next largest in amount of steel products you handle?

A. I suppose that crucible sheets are the next.

Q. Where do you get them?

A. We get them at present from Henry Disston & Sons.

Q. That is in Philadelphia?

A. Yes.

Q. Are they the saw makers?

A. Yes.

Q. Where did you get them formerly?

A. The Crucible Steel Company.

Q. Did you ever buy any from any subsidiary of the Steel Corporation?

A. No, sir.

Q. Now, is there any other article of steel manufacture which you handle to any considerable extent?

A. Yes, chrome vanadium steel.

Q. What is that used for?

A. It is used for automobile parts, shafts, axles and other parts of machinery requiring great strength.

Q. That is not what we sometimes call chrome nickel, is it?

A. No, it is still an advance on chrome nickel.

Q. Where do you get that?

A. Carnegie Steel Company.

Q. How long have you been handling that?

A. About a year.

Q. How long has that been on the market?

A. Well that has been known, I suppose, about two years, but we did no into it until about a year ago.

Q. Does anybody else make that but Carnegie?

A. Yes, the Crucible Steel Company make it, and there is a lot of it imported.

Q. Now, in respect to these various articles that you deal in, is your trade solicited by representatives of manufacturers other than those you buy from?

A. Yes, sir.

Q. In which of them is there competition for your trade?

A. Why, you mean competition with the American Steel & Wire Company?

Q. No; in which of them, whomsoever you buy from, no matter whom, do others compete for your trade?

A. Yes, sir.

Q. I say, as to which of them is there competition to sell you? That is, which concerns try to sell you, other than the one you buy from?

A. I do not know as I quite get you.

Q. Let me put it this way: To go back to the wire products, you have bought some of them from the American Steel & Wire Company?

A. Yes, sir.

Q. What other concerns have competed for your trade?

A. The Crucible Steel Company; Morris & Bailey; American Tube & Stamping Company; the New Milford Rolled Steel Company.

Q. And you have bought 80 per cent of your requirements more or less from some one or other of those you have named?

A. From others.

Q. I mean from others; I did not mean from the others altogether.

A. Yes, sir.

Q. And 20 per cent. from the American Steel & Wire Company?

A. Yes, sir.

Q. Did you ever ask for quotations from these various concerns on these wire products?

A. Yes, sir.

Q. And besides you are visited by their representatives, do I understand?

A. Yes.

Q. Have the prices quoted by them been the same or different?

A. Different in some cases and the same in others.

Q. To what extent have they been the same?

A. Why, at one time there was quite—well, they were the same, almost every mill wanted the same price.

Q. When was that?

A. I think that was about five years ago.

Q. How long did that time last?

A. That continued for quite a while; two or three years.

Q. What products were they that were quoted to you that way?

A. Flat wire.

Q. That is the only wire product that you bought, is it?

A. Yes. Well, some small quantities of other wire.

Q. That is what you are speaking of, the flat wire?

A. Yes, sir.

Q. For a period of some time, two years or more, I think you said?

A. I think about that.

Q. They quoted to you the same price?

A. About the same price.

Q. How long ago was that?

A. About three years ago.

Q. Well, three to five or three to one?

A. About three years ago.

Q. Was it three years up or three years down?

A. Well, their prices continued the same for about two years.

Q. Yes, I know it.

A. Since that time there have been differences.

Q. But I do not understand whether that two years began three years ago or began five years ago.

A. I intended to say about two years, beginning five years ago.

Q. That is what I wanted to get at. Now, with regard to the other things: Have the prices quoted been the same or different, that you paid?

A. They have been different.

Q. And before this period of five years, were the quotations then on this flat wire that you bought——

A. Very different.

Q. For all the period of ten years, except the period of two years that you alluded to, the quotations have been different?

A. Yes, sir.

Q. Do you know why they happened to be the same in those two years?

A. Well, about five years ago the manufacturers of flat wire made the same price for sale in coils or rolls that they did in straight lengths; and the American Steel & Wire Company, in order to get rid of a lot of this straightening and cutting, made lower prices on coiled stock, which was away

below anything that had ever been offered by the other manufacturers; and the other manufacturers had to make these prices; and the business was good, and they stayed just about there for a period of two years. Nobody made any change.

Q. The Steel & Wire Company put down that price?

A. They put down the price.

Q. And for what reason, did you say?

A. Because it did not cost as much to produce coiled stuff as it did the straightened and cut stuff.

Q. How much was the drop they made in the price?

A. According to size. I would say an average of probably 25 to 30 cents a hundred pounds.

Q. Is anybody else making this chrome alloy steel?

A. Yes; the Crucible; the Halcomb Steel Company and the Vanadium Steel Company of America.

Q. Does anybody else make it?

A. There may be, but I have not gone into it.

Q. Have you received quotations from both of them and the Carnegie on that?

A. Yes.

Q. And are they the same or variant?

A. They are variant.

Q. Why have you bought from the Carnegie instead of the Crucible?

A. The Carnegie Steel Company's product we regarded as a more satisfactory product than that of other manufacturers.

Q. How is the price compared with the price of the Crucible?

A. I think the price is a little lower.

Q. Has the price been the same all this period of two years, or have there been fluctuations?

A. One year it has been the same to us.

Q. Did the other year vary?

A. We were not handling it in a large way before that; only in a very small way. Some we imported and some we bought from Krupp here; and we bought it in small lots anyway.

CROSS EXAMINATION.

By Mr. Dickinson:

Q. How much chrome vanadium did you buy during the year 1912, in money?

A. Oh, it is pretty hard to say that; I do not think it was over $500 worth.

Q. And the preceding year?

A. None.

Q. Was last year the first year you bought it?

A. Yes.

Q. Take crucible sheets. From whom did you get them?

A. From the Crucible Steel Company. What year do you refer to?

Q. Well, take the year 1912.

A. From Henry Disston & Sons.

Q. And the year before that?

A. From Henry Disston & Sons the year before that.

Q. Who makes those crucible sheets; what makers?

A. The Crucible Steel Company of America, the Halcomb Steel Company, Henry Disston & Sons; I think that is about all.

Q. That is all you can name?

A. Yes.

Q. None of the subsidiaries of the Steel Corporation sell that, do they?

A. I do not think so.

Q. So there is no question of competition or bidding on that so far as they were concerned?

A. No.

Q. From whom did you get your tool steel last year?

A. The Halcomb Steel Company.

Q. Who were the makers that bid for your purchases on that?

A. The Crucible Steel Company; the John Illingworth Steel Company; those were the only ones that we have ever considered at all in the tool steel line.

Q. So none of the subsidiaries of the Steel Corporation were competitors for that?

A. No.

Q. Did they make it?

A. I don't think so.

Q. Now, are not flat wire and chrome vanadium the only articles that you have named that any of the subsidiaries of the United States Steel Corporation make?

A. Yes. And some small quantity of round wires.

Q. You did not mention round wire in your direct examination?

A. Yes; I mentioned it.

Q. How much a year do you get of that?

A. Oh, forty tons.

Q. What would that be worth?

A. About $3,000.

Q. Take the year 1912; from whom did you get that?

A. We got some from the American Steel & Wire Company and some from the Spencer Wire Company.

Q. Take the flat wire for the year 1912, how many tons did you get?

A. Altogether in the year 1912 about 1,200 tons.

Q. What proportion of that went to the American Steel & Wire Company?

A. About 250 tons.

Q. Was that all under contracts or in order to fill your stock from time to time as emergency called for?

A. All our purchases are to keep our stock replenished and some for direct shipment.

Q. You sometimes make those orders direct without taking bids?

A. We of course find out what everybody's quotation is going to be for the contract to cover a certain period.

Q. What do you mean by that? For every purchase of flat wire?

A. For every contract.

Q. What do you mean by every contract?

A. A contract might be for 100 tons or 200 tons, 250 or 500 tons.

Q. Did you ever make purchases of smaller amounts to meet emergencies, to fill up your stock?

A. No.

Q. You always got that by contract?

A. Oh, yes we have; we bought from other concerns. We bought from the New Milford Cold Rolled Steel Company.

Q. Did you take bids on that?

A. We asked them for quotations.

Q. From that company?

A. Yes.

Q. At the time you did that did you have in mind the quotations from other companies?

A. Not at that time.

Q. Do you know what percentage such purchases bore to your yearly purchases in flat wire?

A. We placed an order with the New Milford Company for 50 tons of steel for flat wire.

Q. For what year?

A. That was the early part of 1913.

Q. Did you buy any in 1912 from them?

A. No.

Q. 1911? From whom did you buy your flat wire?

A. We bought some from the Spencer Wire Company and some from the American Steel & Wire Company and some from the Crucible Steel; and some from the American Tube & Stamping Company.

Q. How much was on contracts and how much on direct orders without taking bids?

A. It was all contracts.

Q. What method did you proceed under in taking bids, just tell me what your *modus operandi* was?

A. Just asked them what their price would be for a contract.

Q. Stating the amount?

A. Stating the quantity.

Q. And the delivery?

A. Yes.

Q. Take the year 1910; do you know who bid that year for your contracts on flat wire?

A. In 1910 we were doing business principally with the Crucible Steel Company.

Q. What do you mean by doing business principally with them?

A. Why, we liked their product pretty well and their price was satisfactory.

Q. And you just went on giving them orders?

A. Yes.

Q. That year you did not make your purchases on bids then, you dealt with that company without bids?

A. Yes.

Q. Take 1911, how did you buy?

A. We began to get away from the Crucible Steel Company in 1911.

Q. Take 1909.

A. Principally with the Crucible Steel Company.

Q. And did you buy from them in 1909 the flat wire like you did in 1910?

A. In 1909 we bought a considerable quantity of it, the narrow widths and that sort of thing we bought from the American Steel & Wire Company.

Q. What percentage did you buy from the American Steel & Wire Company?

A. It is impossible for me to say, but it was about 20 per cent.

Q. And 80 per cent. you got from the Crucible Steel Company?

A. Yes.

Q. And you bought it on direct dealings with them without taking bids?

A. Yes.

Q. What kind of goods did you state the American Steel & Wire Company cut the price on?

A. That is flat wire.

Q. I do not want to quote you incorrectly, but I understood you to say, and if I am wrong you may correct me, that they did this to prevent cutting in price. Did you say something of that sort?

MR. LINDABURY: Oh, no.

MR. DICKINSON: Let the witness say.

MR. LINDABURY: I beg your pardon.

THE WITNESS: At that time the price for flat wire, both in coils and straight lengths was the same; it cost a great deal more to manufacture it in straight lengths, because it had to be made in coils and then straightened, and then cut, and the American Steel & Wire Company reduced the price by deducting the cost of straightening and cutting it and put out their stuff at a great deal lower price.

By MR. DICKINSON:

Q. That brought about a reduction in the coiled stuff?

A. That brought about a reduction.

Q. And the others came down to that price?

A. They had to follow.

Q. And after that was that price pretty constant then?

A. Pretty constant.

Q. Amongst all of them?

A. Among all of them.

By MR. LINDABURY:

Q. And that was how long?

A. About two years, I think.

Q. Did they solicit your trade actively during that time, different manufacturers?

A. Yes.

Q. How actively did they do it?

A. Their salesmen would come in as often as they got to New York, those that were out of New York.

Q. How did they try to get your trade?

A. They appeared to be pretty good fellows and they asked us to give them some business.

Q. Did you buy from the best friend or the best bidder?

A. We bought from the concern that would supply us the quickest, the best quality at the lowest price, or an average of those three things.

Q. And that has been your universal practice?

A. Absolutely so.

Q. And friendship in business did not cut any ice?

A. It did not cut any ice at all except that all things being equal you would naturally give the order to a friend.

(Whereupon an adjournment was taken until tomorrow, Friday, October 24, 1913, at 10:30 o'clock a. m.)

ONE HUNDRED AND SECOND DAY.

EMPIRE BUILDING,
71 Broadway, New York City,

Friday, October 24, 1913.

Before Special Examiner JOHN ARTHUR BROWN.

Present on behalf of the United States, MR. DICKINSON and MR. COLTON.

Present on behalf of the Defendants, MR. LINDABURY, MR. SEVERANCE and MR. BOLLING.

EDWARD H. MASON

was called as a witness on behalf of the defendants, and being first duly sworn, testified as follows:

DIRECT EXAMINATION

By MR. LINDABURY:

Q. Mr. Mason, where do you live?

A. Providence, Rhode Island.

Q. What is your business?

A. I am a manufacturer of tin containers of various kinds.

Q. Including what we know as tin cans?

A. Tin cans, tin boxes, and pails, different kinds of containers.

Q. Different kinds of tin containers; you mean tin containers, I suppose?

A. Yes.

Q. Is your business incorporated?

A. It is.

Q. Under what name?

A. The Mason Manufacturing Company.

Q. And where is it carried on?

A. Providence, Rhode Island.

Q. How long ago was the Mason Manufacturing Company incorporated?

A. October 1, 1908.

Q. Did you develop a new business after its incorporation, or did you take over some previous business?

A. We took over the business that was owned by the Oakdale Manufacturing Company.

Q. Are you an officer of the Mason Manufacturing Company, the successors?

A. Yes.

Q. Were you connected with the Oakdale Company?

A. I was.

Q. For how long a time?

A. Five years.

Q. Beginning in what year?

A. 1903.

Q. Was the business of the Oakdale Manufacturing Company kindred to that carried on by the Mason Manufacturing Company?

A. It was the same.

Q. And carried on where?

A. In the same plant.

Q. What is your connection with the Mason Manufacturing Company?

A. I am president, general manager and treasurer.

Q. What was your connection with the Oakdale Company?

A. I was the treasurer, and shortly after I went there I was made the general manager.

Q. Where did the Oakdale Company get its plate?

A. They were buying of the American Sheet & Tin Plate Company at that time.

Q. At what time?

A. 1903.

Q. How long did they continue to buy of that company?

A. Why, they bought about all the time, from that up to 1908.

Q. Why were their purchases bought or made from the American Sheet & Tin Plate Company?

A. Why, in the early years, 1903, 1904 and 1905, the old Oakdale Company was not very strong financially, and we received some accommodation from the American Sheet & Tin Plate Company that made it worth while.

Q. Did you receive quotations sometimes from other manufacturers?

A. We did.

Q. At the same or a better price?

A. Practically the same; there were minor differences.

Q. There were minor differences sometimes?

A. Yes, sir.

Q. Why didn't you buy where it was cheapest?

A. As I previously stated, we were getting financial help, or at least time on our accounts that we could not very well get by.

Q. Could not afford to change then for better prices?

A. No, there was no incentive at that time.

Q. How has it been since the Mason Manufacturing Company was formed?

A. Entirely different.

Q. Has that had sufficient capital?

A. Yes, sir.

Q. Where have you bought since that company was formed?

A. We have bought from the American Sheet, Phillips Sheet & Tin Plate Company, Pope Tin Plate Company, Jones & Laughlin, Trumbull Steel Company.

Q. During the career of the Mason Manufacturing Company have you bought on a competitive basis?

A. Yes, sir.

Q. Strictly?

A. Yes, sir.

Q. Discounting your own bills?

A. Always.

Q. So you have been in a position to take advantage of the market?

A. Yes, sir.

Q. What do you say as to whether quotations from the

different manufacturers to the Mason Manufacturing Company have been uniform or variant?

A. They varied.

Q. Has that been the case during the whole career of the Mason Manufacturing Company, that they have varied?

A. Yes, sir.

Q. And have your purchases been determined by the price quotations?

A. Not wholly.

Q. What else has entered into the question?

A. Quality and delivery.

Q. What percentage of your purchases have been made from the American Sheet & Tin Plate Company since the Mason Company was formed?

A. I do not think we have bought but very little of them. I know we did not during 1908, 1909, 1910 and 1911; practically out.

Q. Have they quoted prices to you regularly during that time?

A. Yes, sir; we have always had their quotations.

Q. And have these other manufacturers that you have named quoted prices to you regularly?

A. Yes, sir.

Q. And from whom have you made the largest of your purchases?

A. Phillips Sheet & Tin Plate Company.

Q. And what company has received the next largest amount of your orders?

A. American Sheet & Tin Plate.

Q. What other companies have you purchased from?

A. The Pope Tin Plate Company.

Q. How much do you use a year?

A. Approximately 40,000 base boxes.

Q. In what form do you buy tin plate?

A. We buy what is termed American cokes.

Q. That is sheet iron tin coated?

A. Yes.

Q. Or sheet steel tin coated?

A. Yes.

Q. You buy it all coated, do you?

A. Yes.

Q. Do you use anything else?

A. Very seldom. Once in a while we buy a little black sheet.

Q. Are there various grades of tin?

A. Tin plate?

Q. Yes.

A. Yes, sir.

Q. Do you buy some or all of the various grades?

A. No; we buy largely what is termed the American coke, the ordinary coke plate.

Q. That is the name of a particular grade, is it?

A. Yes.

Q. You use that mostly?

A. Yes, sir.

Q. Is that the common tin that is used in commerce?

A. Yes, sir.

Q. Used in making pails and tin cans and the like?

A. Yes, sir.

Q. And of that you use about 40,000 base boxes a year?

A. Yes, sir.

Q. Do you buy on yearly contracts, or from time to time as your requirements dictate?

A. Our contracts generally cover a period of six or twelve months.

Q. That is, you buy the amount you estimate you will need?

A. Yes, sir.

Q. For about six months?

A. Yes. Frequently a year's time.

Q. And have the Phillips Company and the Pope Company and the American Sheet & Tin Plate, on the occasions that you bought from them, offered you the best price?

A. The Phillips, did you say?

Q. The Phillips, and the Pope, and the American Sheet & Tin Plate.

A. Yes.

Q. From each of which you have bought at different times, I understand you?

A. Yes, sir; we have.

Q. Since the Mason Company was formed?

A. Yes, sir.

Q. Have they on the occasions you bought from them, offered you the best prices?

A. That is generally so.

Q. And that is the reason, is it, that you gave your orders?

A. Naturally, yes. There are times when we want something special and we have to buy it where we can get it.

Q. Have you seen any indications of a combination between these manufacturers as to the price of tin during this period the Mason Manufacturing Company has been buying?

MR. DICKINSON: This is objected to as incompetent, calling for a mere opinion of the witness upon a state of facts not shown to be within the knowledge of the witness, and not shown to the Court.

THE WITNESS: I never have.

By MR. LINDABURY:

Q. I suppose you know what competition is when you see it, don't you?

A. Yes, sir.

Q. How has that activity of competition been manifested?

A. We have been interviewed by representatives of the different mills.

Q. Frequently?

A. Yes, sir.

Q. How often do they visit you and solicit your trade?

A. That is a question very hard to answer; it depends upon conditions but I should say they get around every three or four months.

Q. You have already said they offered different prices to you?

A. Yes, sir.

Q. And do they offer different terms and conditions in other respects than prices?

A. No, sir.

Q. I mean as to delivery and quality; anything of that kind? Is there any competition between them as to deliveries or as to quality or is the competition confined to prices?

A. The competition would be confined to prices and quality.

Q. There is competition on the quality?

A. At times.

Q. At times?

A. At times; yes, sir.

MR. LINDABURY: Take the witness.

CROSS EXAMINATION.

By MR. DICKINSON:

Q. Mr. Mason, in 1903 you began with the Oakdale Company?

A. Yes.

Q. What position did you hold with them then?

A. I was appointed treasurer.

Q. You were the treasurer?

A. Yes.

Q. Now, in 1903 did you buy all of your tin plate from the American Sheet & Tin Plate Company?

A. That is as my recollection serves me.

Q. That is your recollection?

A. Yes, sir.

Q. Now, have you continued that up to the time of the formation of the corporation?

A. No, sir.

Q. How long did you continue it?

A. Three years.

Q. 1903, 1904 and 1905?

A. Yes, sir; that is right.

Q. Is it not a fact that in 1903 the American Sheet & Tin Plate Company had most all of the mills that made that character of tin plate in the United States?

A. If we had had plenty of money to do that, I think we could have bought all the plate we wanted. I am not capable of answering your question.

Q. You do not know, then?

A. I could not say as to that.

Q. You say you got accommodations from the American Sheet & Tin Plate Company?

A. Nothing unusual. I am perfectly willing to explain that to you. At that time——

Q. Suppose you do.

A. At that time the Oakdale Company were financially weak; that is, they did not have money sufficient to swing their business, and the American Sheet & Tin Plate Company wanted that they should pay sight drafts with bill of lading attached, and I refused to do it. I told them that if they did not want the business on a discount basis, or thirty days, why that we would go out, and they decided to grant us that privilege, and naturally we stayed with the American Sheet & Tin Plate during that period.

Q. Did you make yearly contracts with them?

A. Yes, sir.

Q. For those three years, from year to year?

A. I do not know that they were all yearly, but they were long time contracts, usually six months or a year.

Q. Did not those contracts require you to take your whole requirements from them?

A. No sir; there was no restriction of that kind; not a bit. It never was mentioned.

Q. Did they require you to take a certain tonnage?

A. Naturally, what the contract called for.

Q. That tonnage was practically all of the tonnage you used for those years, was it not?

A. During that period it was, yes.

Q. Take the year 1906: Then you say you became more independent?

A. No; I beg your pardon.

Q. I mean, financially.

A. We were trading with other mills after that time.

Q. And you began in 1906?

A. Yes, sir.

Q. In 1906 did you buy any from the American Sheet & Tin Plate Company?

A. Yes, sir.

Q. What proportion?

A. A large proportion.

Q. Give the percentage of that.

A. I should say 75 per cent.

Q. In 1907 what percentage did you get?

A. About the same.

Q. And in 1908?

A. We were out altogether. We discontinued trading with them.

Q. In 1908?

A. Yes.

Q. How long did you stay out with them?

A. About four years.

Q. That would bring you to what year?

A. That would bring it up to 1912.

Q. Did you resume relations with them in 1912?

A. Yes.

Q. What proportion of your requirements did you get in 1912 from them?

A. About 25 per cent.

Q. And in 1913 did you buy from them?

A. Yes, sir.

Q. In what per cent.?

A. About the same.

Q. Coming back to 1906: How much tin plate did you use then of the kind you have described here in your testimony?

A. I should estimate between twenty and twenty-five thousand base boxes.

Q. In 1907 about how much?

A. I do not think there was any material change.

Q. Up to what time?

A. Until after 1908.

Q. Then that would be 1909, would it not?

A. Yes, sir.

Q. What was it then?

A. It has been gradually increasing. I could not give you

the exact figures, but it has been a gradual increase from 1908 up to the present time.

Q. From 1908?

A. Yes, sir.

Q. So your increase really began to show itself in a pronounced way in 1908?

A. Yes.

Q. Before that it had been very much a constant figure?

A. Yes.

Q. In 1906, the first year that you began to deal with others than the American Sheet & Tin Plate Company, from whom did you buy besides that company?

A. From the Phillips Tin Plate Company and the Pope Tin Plate Company.

Q. Then you bought from the Phillips Company and the Pope Company and the American Sheet & Tin Plate Company for that year?

A. During the years 1906 and 1907.

Q. How much of that was bought on contracts running over periods say of six months or more, and how much of it was to meet your needs from time to time as emergency in your business required?

A. I could not answer that question.

Q. Did you say that you bought for 1906 75 per cent of your consumption from the American Sheet & Tin Plate Company?

A. That is as my memory serves me on that.

Q. Was that on contracts?

A. Yes.

Q. Were they contracts requiring you to take a minimum quantity——

A. They were contracts that called for a specific tonnage.

Q. (Continuing) or were you to take not less than a specified tonnage?

A. We were required to take just what the contract called for.

Q. No more and no less?

A. No more and no less.

Q. For the year 1906 the contract with the American Sheet

& Tin Plate Company for that year's supply was made at what time?

A. I do not know.

Q. Do you know whether it was made in 1906 or 1905?

A. Probably it was made in the latter part of 1905.

Q. You cannot locate it?

A. I have no definite recollection of that.

Q. Do you know now the prices on which it was made?

A. I do not.

Q. Did you make the contract yourself?

A. I did.

Q. Do you know what the bid was from them?

A. I do not.

Q. Do you know what the bid from any other competitor was for that contract?

A. No, sir; I have no data on that.

Q. You have no recollection about it?

A. No, sir.

Q. And no recollection as to any variations in the bids or what the variation was.

A. Not what the variation was. As my memory serves me, we had variations.

Q. How far does your memory serve you? It does not serve you enough to give you the time when it was made, or even the year?

A. No, sir.

Q. And you do not know the prices that were made or offered by each of these competitors for that contract?

A. No.

Q. Referring to that particular contract, can you say that you remember that on that particular contract there were particular bidders, and state who the bidders were?

A. No, sir; I did not state that.

Q. And you do not state that now?

A. No, sir. I state that I am very positive that we always had variations in our figures from the different mills.

Q. But as to that contract for 75 per cent. of your consumption for the year 1906, you cannot state the time it was let, whether in the early part of 1906 or the latter part of

1905, nor can you say there were any bidders for it other than the American Sheet & Tin Plate Company?

A. Yes, sir; I stated that twenty-five per cent. of that went to other mills.

Q. Twenty-five per cent.?

A. Yes.

Q. Did you make the contract for twenty-five per cent. at the same time that you made the contract with the American Sheet & Tin Plate Company for seventy-five per cent.?

A. Probably about that time.

Q. Do you remember whether you did or not?

A. No, sir; I do not.

Q. Do you know whether the award for the 25 per cent. was taken on competitive bids at the time made for the contract upon which you awarded the 75 per cent., or whether they were different bids and different transactions entirely?

A. It was a competitive bid.

Q. I do not think you catch my meaning, Mr. Mason. What I want to get at is: Were there two periods of competitive bids, one when the 75 per cent. was awarded, and the other when the 25 per cent. was awarded, or was it all at one time, and did you at that time award 25 per cent. to others than the American Sheet & Tin Plate Company?

A. I could not say.

Q. You have no recollection as to when those bids were taken and whether they were separate?

A. That is too definite. I could not answer that.

Q. Nor the prices, nor the variation in prices?

A. No, sir.

Q. Now, take the contract for the year 1907; 75 per cent. of that went to the subsidiaries of the Corporation, did it not?

A. It went to the American Sheet & Tin Plate Company.

Q. How much was involved in that 75 per cent?

A. I could not say, but probably 15,000 or 20,000 boxes.

Q. When was the contract for that year made for that 75 per cent?

A. I could not say.

Q. Do you know whether it was made in 1907 or 1906?

A. If my memory serves me, I think it was made just about the new year.

Q. But have you a distinct recollection of the time, in connection with it?

A. No, sir.

Q. You are speaking very generally, are you?

A. I am speaking very generally; we have to make these contracts before the time that we need the plate; otherwise we would not get it.

Q. As to that contract for 1907 which you awarded to the American Sheet & Tin Plate Company, and as to the time of the making of which you are uncertain, do you now recall and can you state what other bidders there were on that contract and what the prices were?

A. I can state who the bidders were.

Q. Can you state what the prices were?

A. No, sir.

Q. Do you carry anything in your mind about the relative prices bid by them?

A. Yes, sir.

Q. Have you got those bids in writing?

A. No, sir.

Q. You have not got them in writing?

A. No, sir.

Q. And you say that you carry in your mind now the bids on that contract for 1907 which was awarded to the American Sheet & Tin Plate Company?

A. Yes; I know what the relative difference was.

Q. What price did you pay under that contract?

A. We paid the official price, so-called.

Q. What is the official price, so-called?

A. The manufacturers call it the official price, because we get it through "The Metal Report." It is the quotation that is usually made by the American Sheet & Tin Plate Company.

Q. And the quotation made by the American Sheet & Tin Plate Company was then known in your trade as the official price?

A. That is what we termed it.

Q. That is what I want to get at. And other people in your line of business so termed it?

A. Well, I have heard it called that.

Q. You called it that to each other, those of you who dealt in that product?

A. Yes.

Q. You paid the official price?

A. We did.

Q. Was that the price as quoted on the market?

A. Yes.

Q. And on that official price you awarded 75 per cent. of your consumption for the year 1907 to the American Sheet & Tin Plate Company?

A. I think so.

Q. Now, you say about 25 per cent. you awarded to others?

A. Yes.

Q. Now, state to whom you awarded it that year, and what proportions.

A. I can not do that; I do not recollect.

Q. Now, this 25 per cent. that you awarded that year, in proportions which you can not give, to other bidders than the American Sheet & Tin Plate Company, was that a separate contract and a separate bid from the one upon which the 75 per cent. was awarded?

A. It certainly was; it was another mill.

Q. I mean, were the proposals, or whatever you did to get prices—was that at the same time or at separate periods?

A. I don't remember.

Q. Then you do not know for that year whether this 25 per cent. was 25 per cent. of the award made at one time, of which you gave 75 per cent. of the whole to the American Sheet & Tin Plate Company, or whether it involved separate transactions at different periods of time?

A. In all probability it was not the same date.

Q. I am not asking you for probabilities; I am asking what you recall, what you can state.

A. We did not make it on the same date.

Q. When did you make it?

A. I could not tell you definitely, but as I told you before,

we make these contracts early in the year, and in all probability those contracts were made right around the new year.

Q. Take these contracts covering the 25 per cent that you gave to others than the American Sheet & Tin Plate Company, what period of time did they cover?

A. One of them covered a year.

Q. Who was that with?

A. Phillips.

Q. What price did you pay Phillips for tin plates for that year?

A. We had a five cent concession.

Q. From what?

A. From the price that we paid to others.

Q. So that year on that contract Phillips offered you five per cent below?

A. No, I didn't say that; five cents per base box.

Q. Below what you understood to be the official price?

A. Yes.

Q. Do you remember, if you did take bids on that 25 per cent, whether it was a bid for the whole 25 per cent or whether that was cut up into various contracts on which bids were solicited at different times?

A. No, that was divided up; we bought from two mills.

Q. I understand, but did you take your bids for that whole 25 per cent at one time or more than one time?

A. I could not answer that; I do not know.

Q. Could you say, if there was more than one transaction and one solicitation of bids involved in that 25 per cent., who the bidders were and the times when the bids were made and what the prices were?

A. As I stated, there were only two other bidders at the time, and I gave each one of them some of the business.

Q. Some of the business?

A. Yes.

Q. Then you divided up your business among all of those who bid on that contract for that year, did you?

A. We were buying from three mills.

Q. Come down to the next year, 1906.

A. In 1906 I thought you were asking about.

Q. Did you understand I was referring to 1906?

A. Yes.

Q. Then I will let your answer stand for 1906, even if I should have spoken of or specified 1907, and now I will ask you about 1907.

A. The conditions were practically the same.

Q. In 1906 and 1907?

A. Yes.

Q. So, if I address the same character of questions in respect to both of those years, your answers would be substantially the same?

A. Yes.

Q. Did you buy from the American Sheet & Tin Plate Company in 1909?

A. No, sir.

Q. Now, in the year 1909 was there not a very decided drop in price from what it was in 1906, 1907 and 1908?

A. I can not say.

Q. If there were such, you do not recall it?

A. I do not recall it, no.

Q. In 1909 do you remember what price you paid?

A. I do not.

Q. Do you remember what you paid in 1906, 1907 and 1908?

A. I do not.

Q. To any of these dealers?

A. No, sir.

Q. You could not give any of the prices under which those contracts were made?

A. No.

Q. Do you know whether in 1909 you paid the official price or not?

A. I do not know what we did pay.

Q. Well, would that be the same as to 1910 and 1911?

A. Yes.

Q. Would your answers be the same?

A. Yes.

RE-DIRECT EXAMINATION.

By Mr. Lindabury:

Q. Coming back to an early period, when the Oakdale Manufacturing Company was conducting the business, and you made your contracts altogether with the Sheet & Tin Plate Company, who named the amount that you were to take under those contracts, you or the tin plate company?

A. I did.

Q. Did the Sheet & Tin Plate Company ever try to prevent you from buying anything you wanted to from their competitors?

A. No, sir.

Q. Did they ever ask you to enter into any contract to buy wholly from themselves?

A. I never heard it mentioned.

Q. They did give you financial help in the shape of extended credits?

A. Yes, sir.

Q. Did they ever ask any consideration for that?

A. Never.

Q. In the way of exclusive purchases or higher prices or anything of that kind?

A. Never.

Q. You say the American Sheet & Tin Plate had a published price?

A. As my memory serves me they always had a published price.

Q. And was that published in the papers?

A. In the "Metal Market".

Q. That is a publication that comes out how often?

A. Daily.

Q. And where is the publication made, here in New York?

A. I think so.

Q. And is that the price that you referred to as the official price?

A. Yes, sir.

Q. That is, it is the Sheet & Tin Plate Company's official price?

A. Yes.

Q. Is that the price that has been generally quoted by the competitors of the Sheet & Tin Plate Company, or do they quote their own prices?

A. They quote their own prices.

Q. It is simply the price of the Sheet & Tin Plate Company?

A. Yes.

RE-CROSS EXAMINATION.

By Mr. Dickinson:

Q. You mean to say that their competitors never quoted the same price at any time as that?

A. Oh, I think they have.

Q. You did not mean to say, then, that their prices were always different?

A. Nine times out of ten there is a variation.

Q. Well, now, you say that they never asked you when you got this financial assistance anything in regard to your exclusive business, but as a matter of fact they got it all, didn't they?

A. They got it all, but that point was never brought up.

Q. It did not have to be brought up so long as they were getting it, did it?

A. It did not seem so.

By Mr. Lindabury:

Q. They got it by your free act, didn't they?

A. They certainly did. They wanted something that they did not get; that was cash with the bill of lading.

MARK FISHEL

was called as a witness on behalf of the defendants, and being first duly sworn, testified as follows:

DIRECT EXAMINATION

By Mr. Severance:

Q. Where do you reside?

A. In New York.

Q. What is your business?

A. The name of the concern?

Q. Your position in the company and the name of the concern?

A. Universal Caster & Foundry Company; my position is secretary and treasurer.

Q. What have you to do with purchases?

A. I do the entire purchasing of the corporation.

Q. How long have you been with that company?

A. Since its incorporation.

Q. When was that?

A. Since 1903.

Q. Have you had charge of the purchases during all that time?

A. During all that time.

Q. What are the products manufactured by the Universal Caster & Foundry Company?

A. We manufacture casters, outlet and switch boxes and steel stampings.

Q. Outlets and switch boxes, they are for electrical purposes?

A. For electrical purposes.

Q. Kindly explain what steel stampings are?

A. It means any particular kind of work that is brought into our place to be made from steel in power presses.

Q. You stamp out these various things, do you?

A. Stamp out these various things from steel.

Q. How is your business in size as compared with that of competitive concerns?

A. It is very much larger.

Q. Than any of the competitors?

A. Than any of my competitors.

Q. Is it increasing in output?

A. There is a gradual yearly increase.

Q. What steel products in the way of materials from which you manufacture your products do you have to purchase?

A. Hoops, cold rolled strip steel and wire.

Q. From whom have you, during these ten years that your company has been in existence, bought your supplies of hoop steel?

A. From the Carnegie Steel Company, American Tube and Stamping Company.

Q. Where are they located?

A. Bridgeport, Connecticut; West Leechburg Steel Company.

Q. Where are they located?

A. West Leechburg, Pennsylvania.

Q. Upon what basis have you placed your orders for steel?

A. Well, on an absolutely competitive basis.

Q. Has your business been solicited by any other hoop manufacturers aside from the three you have mentioned?

A. Practically all of the hoop manufacturers of the country, I should say.

Q. Are there a good many others besides those three?

A. There are some.

Q. But you have confined your purchases to the three stated, have you?

A. Practically.

Q. What has been the fact as to whether these concerns from whom you have purchased have quoted you uniform or varying prices upon their commodities?

A. They have usually quoted varying prices, depending upon trade conditions existing at the time.

Q. Has there been anything in the character of the competition that you have observed to indicate to you any concerted action as to prices on the part of those companies?

MR. DICKINSON: This is objected to as calling for a mere conclusion of the witness upon a state of facts that may exist in his mind but is not shown to the Court.

THE WITNESS: Absolutely none.

By MR. SEVERANCE:

Q. As a rule how have you placed your contracts; have you bought from time to time or under six months or yearly contracts, or how have you made your purchases?

A. Usually under contracts varying from six months to a year, depending upon trade conditions at the time of placing such contracts.

Q. Have you at the time you were about to enter into those contracts secured quotations from more than one concern?

A. I have always secured quotations from all the concerns prior to my placing any of the contracts.

Q. And were those quotations submitted to you under those circumstances uniform or varying?

A. Varying as a rule.

Q. About what is your annual tonnage requirement of hoop steel?

A. About 5,000 tons.

Q. Of hoop steel?

A. Of hoop steel, yes, sir.

Q. Have there been any times when you have had contemporaneous contracts, that is, contracts with more than one producer?

A. I always have more than one contract.

Q. Have there been times when these contracts running at the same time made with different producers have provided for different prices?

A. The contracts, as a rule, are made at different prices.

Q. Outside of hoop steel what other classes of steel products do you buy?

A. Cold-rolled strip steel.

Q. From whom, during that period you have mentioned, have you made your purchases of cold-rolled strip steel?

A. The American Steel & Wire Company and the Newark Rivet Works.

Q. Of Newark, New Jersey?

A. Yes, sir; and the West Leechburg Steel Company.

Q. Have you purchased any cold-rolled strip steel from the American Tube & Stamping Company?

A. Likewise the American Tube & Stamping Company.

Q. What has been the basis on which you have placed your orders for cold-rolled strip steel?

A. Exactly the same basis on which we purchased hot-rolled or hoop steel.

Q. On a competitive basis?

A. A competitive basis.

Q. Have you made those purchases under contracts in the same way in which you testified with reference to hoop steel?

A. Exactly the same.

Q. And were quotations made to you by the different producers of cold-rolled strip steel?

A. Quotations were made to me by the different producers of cold-rolled strip steel.

Q. And were they uniform or varying in price?

A. Usually varying in price.

Q. About what is your annual tonnage consumption of cold-rolled strip steel?

A. Approximately 1,200 tons per annum.

Q. You buy wire also, you said?

A. Yes, sir.

Q. From whom have you made your purchases of wire during the period in question, the last ten years?

A. From the American Steel & Wire Company and Igoe Brothers.

Q. Upon what basis have you purchased your wire?

A. Upon the same competitive basis as I have purchased hoops and cold-rolled strip steel.

Q. Would your testimony with reference to the varying prices and method of awarding contracts that you have given us as to these other commodities apply to the wire?

A. Yes, sir.

Q. Have the respective concerns, the American Steel & Wire Company and Igoe Brothers, ever had contracts from you covering your entire requirements for any one year? I mean have either of them had such contracts?

A. No, sir.

Q. You have contracts with both?

A. I have contracts with both.

Q. Aside from the matter of price, is there any advantage

possessed by Igoe Brothers over the American Steel & Wire Company in catering to your business?

A. Yes; on account of the proximity of their wire plant to our factory.

Q. Where is your factory?

A. Newark, New Jersey.

Q. And their wire plant is where?

A. In Newark.

Q. How are deliveries made from their wire plant to you?

A. By wagon or motor truck.

Q. They do not require any rail shipments?

A. No, sir; none at all.

Q. The American Steel & Wire Company have to ship their product to you by rail, do they not?

A. Yes, sir; they do.

Q. What are your annual requirements of wire?

A. Approximately 1,200 tons.

Q. Aside from the steel products that you purchase under these contracts, do you make any purchases in the open market?

A. From time to time we go into the open market.

Q. How does that happen? Why do you do that?

MR. DICKINSON: That is as to everything?

MR. SEVERANCE: Yes, as to all classes.

By MR. SEVERANCE:

Q. Why do you go into the open market?

A. We are sometimes caught on a shortage of material and compelled to go into the open market to meet our requirements.

Q. By open market what do you mean; jobbers or manufacturers?

A. Manufacturers.

Q. So that you may have a contract with one or two manufacturers for what you anticipate to be your yearly or semi-yearly requirements, but you may run short and have to buy in the market? That is what you mean?

A. Yes, sir.

Q. Is it your endeavor to keep yourself covered by contracts or not?

A. To keep myself covered by contracts.

CROSS EXAMINATION.

By Mr. Dickinson:

Q. Mr. Fishel, take the subject of wire: Have you a contract or contracts for your supplies for the year 1913?

A. Yes, sir.

Q. With whom are those contracts?

A. There is only one contract in existence for 1913. That is with Igoe Brothers. But I have purchased in the open market from the American Steel & Wire Company.

Q. When was this contract made with Igoe Brothers?

A. Probably the latter part of 1912.

Q. How much wire does it call for in tonnage?

A. I do not recall, sir.

Q. Did you estimate that it would cover your total requirements for the year 1913 when you made it?

A. No, sir.

Q. You knew at the time that you made it that you would have to go out into the market and supplement it?

A. No, sir.

Q. Maybe that needs a little explanation. Would you make your answer a little fuller and explain what seems to be a misunderstanding between us?

A. At the time of placing the contract it is almost impossible for us to tell the exact amount of tonnage, and we approximate a certain amount; and on the increased volume of business, as a rule, we are compelled to go into the market to take care of our future requirements.

Q. Then you just estimate approximately what you would need?

A. Approximately. I did not absolutely estimate it.

Q. So the difference between you and me was that you did not mean you made an exact estimate?

A. Yes.

Q. But you did make an approximate one?

A. Yes.

Q. From whom have you bought in the open market for 1913 other than the American Steel & Wire Company?

A. There is no other concern we have bought from.

Q. You have only bought from that company and from Igoe Brothers?

A. Yes, sir.

Q. What is the comparison between the two as to tonnage?

A. For the year 1913?

Q. Yes.

A. I should say that Igoe Brothers would probably get 80 per cent of the amount of tonnage we consumed in 1913.

Q. And 20 per cent up to this time you have bought from the American Steel & Wire Company?

A. Yes, sir.

Q. Take the year 1912; how much of that was covered by contracts under which you forecast your necessities, and how much did you buy in what you call the open market?

A. I am afraid it is impossible for me to remember those percentages.

Q. Did you have contracts with both companies?

A. I cannot even remember that.

Q. Can you remember that you had a contract with either for the year 1912?

A. I must have had, because all our purchases, as a rule, are made under contract.

Q. You said you used about 1,200 tons per year. Did you use about 1,200 tons in 1912?

A. I should think so.

Q. What would that represent in money value?

A. I cannot remember the selling price or the purchase price of that.

Q. Can you give it approximately—what that would represent in money value?

A. I should think wire was selling at $34 a ton at that time, or thereabouts.

MR. SEVERANCE: That would be $40,800, 1,200 tons.

By Mr. Dickinson:

Q. Well, assuming that Mr. Severance's estimate is right, something over $40,000, you do not know for the year 1912 who you got that from?

A. Yes, I know who I got it from.

Q. I thought I asked you and you said you did not know.

A. No.

Q. Do you know with what companies you had contracts for any part of that $40,000 for the year 1912?

A. Presumably with both companies; I think I answered that before.

Q. You say presumably?

A. Presumably.

Q. Leaving out the word "presumably," can you say that you know that you had contracts with both companies?

A. No, sir.

Q. You may have had it with one or both of them for that year?

A. Yes.

Q. And you do not know how much of that $40,000 was covered under a contract or contracts, and how much you got in the open market?

A. No, sir.

Q. Let us take the year 1911. Did you have any contracts for that year?

A. Are you still speaking of wire?

Q. Yes, I am on wire altogether.

A. Every year we have contracts.

Q. Do you know what proportion of your consumption that year was covered by contracts, and what by the open market?

A. I could not tell you that.

Q. Do you know that you had contracts that year with Igoe Brothers and the American Steel & Wire Company both?

A. No, sir; I could not tell you that.

Q. And you may have had it with both or you may have had it with only one?

A. Yes.

Q. You cannot now recall how that was?

A. No, sir.

Q. How long have you been buying wire from Igoe Brothers?

A. Since 1903.

Q. And how long have you been buying from the American Steel & Wire Company?

A. The same length of time, I should say.

Q. No other contracts? Did you buy from any other companies in those years, and if so, what years and from whom did you buy?

A. To the best of my recollection we have had contracts only with those two companies.

Q. From 1903 down to 1913?

A. Yes.

Q. Can you recall any year where you know you had a contract exclusively with either one of those companies for that year?

A. No, sir.

Q. And you can not mention those years where you may have had contracts with both of them?

MR. SEVERANCE: He has already stated that this year he had a contract with only one. You do not mean to contradict that?

THE WITNESS: No, sir.

MR. SEVERANCE: You mean prior to this year?

By MR. DICKINSON:

Q. Other than the year 1913; I will put that in.

A. No, sir.

Q. Now, Mr. Fishel, don't you know that in the year 1903 the American Steel & Wire Company had under its control a large majority of all the factories making wire in the United States?

A. Do I know that they had?

Q. Yes; will you answer the question?

MR. SEVERANCE: Of course you want to confine his testimony to what he knows, not to any speculation.

THE WITNESS: I am under the impression that I do remember that.

By MR. DICKINSON:

Q. What kind of wire during this period were you buying? Various kinds or generally one kind?

A. Usually open hearth basic wire.

Q. What sizes?

A. Ranging from .125 up to .425, I should think would comprise the ranges.

Q. What was that wire used for by you?

A. It is used principally for stems and axles going into the manufacture of casters.

Q. That is, rollers?

A. Yes.

Q. Now, for any of those years, exclusive of the last year, can you give the relative percentage that you bought from the American Steel & Wire Company and Igoe?

A. No, sir.

Q. Well, could you do it for all the years combined?

A. No, sir.

Q. Take cold-rolled strips: You said you bought about 1,200 tons a year of that?

A. Yes.

Q. Now, with the exception of Igoe Brothers, whose factory was in the same place with you, and who made deliveries to you by wagon throughout that period, 1903 to 1913, the only other manufacture that you bought wire from by contract was the American Steel & Wire Company?

A. Yes.

Q. As to all the others except Igoe, there would have to have been a rail transit for delivery?

A. Yes.

Q. That was the only one that was near enough to deliver in that way?

A. Yes.

Q. For the year 1903, what do you recall of prices, and from whom you solicited business for that year?

A. I do not recall anything about prices. I am never able to recall anything about prices.

Q. Nor the firms you solicited that year?

A. I have answered that by saying the American Steel & Wire Company and Igoe Brothers.

Q. Those are the only two you solicited that year?

A. Yes.

MR. SEVERANCE: What do you mean by "solicited"?

MR. DICKINSON: I mean, to get bids for what he wanted to buy.

THE WITNESS: No; I understood your word to mean purchased.

MR. SEVERANCE: No, it did not mean that. That is the reason I asked that.

By MR. DICKINSON:

Q. What I meant to ask you is this: For the year 1903 from what manufacturers of wire did you get bids, other than Igoe Brothers and the American Steel & Wire Company, on your contracts, what you got under contracts?

A. That is a very hard question to answer, because it goes back a long time, but there was one other bid. That was the Washburn Wire Company.

Q. You mean the Washburn-Moen Company?

A. No, the Washburn Wire Company.

Q. Where was that located?

A. That was located first in Providence; then I think afterwards in New York.

Q. That is the only one you recall that year?

A. The only one I recall that year.

Q. Take the year 1912: What do you recall? I mean, what have you a memory about?

A. As to soliciting?

Q. As to getting competitive bids for your requirements of wire that you bought under contract?

A. I think that the American Steel & Wire Company and Igoe Brothers were the only two, because they both make a special kind of wire that we use, on a competitive basis.

Q. Who else makes this special kind of wire that you use except those two?

A. I do not know.

Q. And so far as you know there are no other makers of that than Igoe Brothers and the American Steel & Wire Company?

A. So far as I have taken the trouble to find out.

Q. And therefore you took no bids on this wire except from those two?

A. Oh, yes, we use other kinds of wire besides that.

Q. Besides what?

A. Besides this particular style and type of wire.

Q. What proportion of the wire that you got under those contracts was this particular type?

A. I should say approximately 1,000 tons.

Q. 1,000 tons out of 1,200?

A. Yes.

Q. So as to that much you only solicited bids from Igoe and the American Steel & Wire Company?

A. I did not solicit any bids at all; they presented quotations to me.

Q. You only got quotations as to prices as to that amount of wire from those two during those years?

A. I probably got quotations from other concerns, but those were the only two that interested me.

Q. What others made that special kind of wire other than those two? I understood you to say that there were no others that you know of?

A. Yes, sir.

Q. Then if you got bids from any others you do not recollect it?

A. I do not except on other types of wire.

Q. Now I am speaking only of that particular type.

A. For that particular type the other bids would not interest me, because we cannot afford to make changes in quality all the time.

Q. So that as to that much of your wire you only got bids from Igoe and the American Steel & Wire Company?

A. Probably.

Q. And that was as to all those years from 1903 to 1913?

A. I think so.

Q. When you bought your wires for a year, say for the year 1912, and made your estimate as to what you needed for that year, an approximate estimate, did you cover all your wires in one purchase, the various kinds?

A. Yes, sir.

Q. So that for the several years where you made contracts, these contracts covered the special wire and also other kinds of wire that you used?

A. Yes, sir.

Q. And they were all covered in one contract?

A. Or two contracts.

Q. And as to that special kind you cannot name any other makers except Igoe and the American Steel & Wire Company?

A. No, sir, for the reason I have not inquired about them.

Q. They did not interest you?

A. They did not interest me.

Q. And you took no bids from them that you recall?

A. Not that I recall.

Q. Would that proportion of special wire to all the wire used be about the same each year?

A. Yes; the same proportion each year.

Q. Mr. Fishel, coming to cold-rolled strips. I do not recall whether you stated what your annual purchase of that was. Yes, you did. I believe 1,200 tons per annum?

A. Yes.

Q. Now take the year 1912; from whom did you buy your cold-rolled strips?

A. Probably from all the concerns that I mentioned; we made our purchases from the American Steel & Wire Company, American Tube and Stamping Company, Newark Rivet Works and West Leechburg Steel.

Q. Were those under contracts?

A. Yes.

Q. Well, take the year that I asked you about, 1912; with which of those companies did you have contracts for the supply of cold-rolled strips for that year?

A. I do not remember, but I should say at least two or three of them.

Q. And you cannot name any of them?

A. No, I cannot, definitely.

Q. And you cannot name the proportion in which they furnished it?

A. No, sir.

Q. You cannot name a single one from whom you purchased cold-rolled strip for the year 1912?

A. Yes, sir.

Q. I asked you that.

A. I did not understand your question, then. You said contracts.

Q. Name the one.

A. Newark Rivet Works.

Q. Now, you know that for the year 1912 you made a contract with the Newark Rivet Works?

A. I do not say contract.

Q. I was speaking of contracts.

A. That is the reason I answered the question the way I did.

Q. Coming back to contracts, do you know any contract that you made for the year 1912 with any particular one of those makers of cold-rolled strips?

A. I am under the impression that that will apply to the Newark Rivet Works as well; we did make a contract with them.

Q. Do you remember that you did?

A. Yes, sir.

Q. When was it made?

A. I have not the remotest idea.

Q. You do not know whether it was made in the year 1912 or the year 1911?

A. I do not think it was made in 1911, because that is not the usual procedure.

Q. I am asking you whether you remember?

A. I do not.

Q. How much tonnage did that cover?

A. I do not remember that, either.

Q. Do you remember the price?

A. No, sir.

Q. Do you remember at the time that contract was made and leading up to it, what prices were made by other makers?

A. No, sir; I do not.

Q. You cannot give us any information about that?

A. No, sir.

Q. Well, take the year 1911, with what concerns did you have contracts for cold-rolled strips for that year?

A. It is hard for me to recall with whom we made contracts. I should say the same answer for 1912 would apply to 1911.

Q. Would that apply to all the preceding years?

A. I should think that would cover the whole series.

MR. SEVERANCE: May I ask what you mean by that answer. Have you had a contract with the Newark Rivet works each year?

THE WITNESS: This was prior to the question of the Newark Rivet works.

MR. DICKINSON: I do not want to get the witness wrong.

MR. SEVERANCE: I do not think the witness understood your question.

By MR. DICKINSON:

Q. You mean the same answer so far as your general recollection of prices and bids is concerned, you do not mean to say by that that you had a contract for each year with this Newark Rivet Company?

A. No, sir; I do not mean that.

Q. What is the money value per year of this 1,200 tons of rolled strip?

A. I cannot recall the average purchasing price of cold-rolled strip.

Q. Well, now, did you use as much in 1903 as you did in 1913?

A. I hardly think so.

Q. Well, about how did it run for those years? What would be about a fair proportion of that 1,200 tons; that did not run evenly through those years?

A. It is very hard to give you a definite proportion of average increase in business. I suppose it has been increasing for the past ten years on a basis of five to ten per cent. per annum.

Q. So in ten years it would be nearly double, would it?

A. I should think so.

Q. So in 1903, instead of 1,200 your idea is you probably used only 600 tons?

A. Five to six hundred tons.

Q. And it increased approximately from five to ten per cent. a year?

A. Yes.

Q. Now, you spoke of a specialty in wire, a part of the wire you used; is this cold rolled strip a specialty?

A. No, sir.

Q. That is standard?

A. Standard competitive merchandise.

Q. Is that a kind of commodity or product upon which there are market prices quoted?

A. There are no printed lists that I know of.

Q. I believe the other commodity that you spoke of was hoop steel?

A. Yes, sir.

Q. Those are the only three, I think, are they not?

A. Yes.

Q. Take the year 1903. How much hoop steel did you buy?

A. It is impossible for me to answer that question.

Q. Well, approximately, could you answer approximately?

A. I should say 2,500 to 3,000 tons.

Q. Well, now, for that year from whom did you purchase?

A. In 1903? You are speaking of 1903?

Q. Yes.

A. American Tube & Stamping Company; Carnegie Steel Company; I do not remember whether the West Leechburg was in existence that year or not, but if it was we purchased as well from them.

Q. When you say that you purchased from these, are you giving a definite recollection, or just giving your general idea?

A. I am basing my assertion on the fact that we have been buying from these people so many years that I see no reason why it should not go back as far as 1903.

Q. But you do not pretend to say that you do now remember that, for that year, you made purchases from all three of those companies?

A. No, sir; I do not care to state that.

Q. Did you buy that under contracts, or part under contracts and part from time to time as emergency required?

A. Yes, sir.

Q. Did you undertake also to forecast approximately what you needed at the beginning of the year and to cover that with a contract?

A. We endeavored to do that.

Q. What was the cost of hoop steel at that time?

A. I cannot recall what it was.

Q. Can you approximate the cost of it?

A. I would not dare approximate the cost of it.

Q. Could you give any proportions covered by contracts with any company or companies for that year?

A. No, sir.

Q. Suppose I should ask you those same questions in regard to the subsequent years down to and including 1911; would your answer be the same? Or, if it would be different, just give what the difference would be.

A. I think my answer would be the same.

Q. You spoke of prices on hoop steel varying. Do you recall, as a matter of memory, that for the years 1903, 1904 and 1905 there were variations? If so, state what they were; what you carry in your mind on that.

A. I cannot carry the actual variation or fluctuation of price in my mind; but there has always been a difference of prices on different quotations for the same quantity of merchandise.

Q. Do you mean to say that there was always a time when you could get some price that was lower than that quoted to you by others, or do you mean to say that every manufacturer, every time, quoted to you a price that varied from all the other quotations by all the other manufacturers?

A. The scope and sizes of hoop steel that we buy are so tremendous that it would be possible for two or three manufacturers or producers of steel to quote the same price on a particular size; but the average prices quoted always fluctuated for different gauges as a rule.

Q. But you cannot give any prices?

A. I cannot recall any prices.

Q. And you cannot recall any bids?

A. I cannot recall any bids.

Q. Or whom you solicited these years for hoop steel?

MR. SEVERANCE: I do not understand the sense in which you use the word "solicited," Judge.

By MR. DICKINSON:

Q. I am not saying solicited you, but whom you asked for bids.

A. I was probably solicited by every hoop manufacturer in those years.

Q. You say "probably." I want to know what you remember; what you carry in your mind as a memory.

A. That is what I carry in my mind, that if I was solicited in 1907, 1908, 1909 and 1910 by all the manufacturers, we will say, of hoop steel, why should I not be solicited in 1903?

Q. Just state, then, for 1909, who got your contract for hoop steel.

A. I cannot tell you.

Q. Can you tell for any of those other years you have named?

A. No, sir; I do not presume to remember my contracts.

Q. From 1903 down to 1911 can you name for any particular one of those years a single manufacturer that you contracted with for hoop steel? If so, state what year it was, and when the contract was made, and all that you can tell about it and all that you remember about it.

A. It is impossible for me to answer that question as a whole. I will answer as to the probable concerns I made contracts with.

Q. The probable concerns?

A. Yes.

Q. And your answer, then, would be based on probabilities, and not upon any distinct memory of any particular contracts?

A. Yes, sir.

Q. What was the price of hoop steel in the year 1911?

A. I have not the remotest idea.

Q. Can you give it in preceding years? I have asked you as to 1903, but other than 1903.

A. No, sir; I cannot remember prices unless I have them before me.

Q. How many different sizes of hoop steel were embraced in your purchases through these years?

A. I probably buy all the sizes in which hoop steel is manufactured.

Q. Can you give me a rough estimate of that?

A. I should say from No. 9 gauge up to No. 21.

Q. Did your contracts, where you made an estimate for a year, cover with one maker all of these sizes, or were there varying contracts for varying sizes?

A. As a rule the contracts were made comprising all these different sizes with the different manufacturers.

Q. And did all of these manufacturers you have named in 1903 make all the sizes that you used then?

A. I cannot recall, sir. I do not remember what they made in 1903.

Q. I will ask you about 1904.

A. The same answer would apply to that.

Q. How about up to 1910?

A. I should think the same answer would apply to that.

Q. When you take quotations under your contracts which you make for an approximate supply for a year, would you embrace in the contract all of these various sizes?

A. If the manufacturer who quoted these prices made all those various sizes.

Q. And do you recall for any year that you divided up the contracts because some of the bidders or some who quoted prices did not make all of them, and made you a different price on those which they did make, and that you excepted those and secured them from the others?

A. I cannot recall circumstances of that sort; no, sir.

Q. Well, Mr. Fishel, can you recall that for any year you divided up contracts for the reason that some of the bidders did not make all the sizes that you wanted in your approximate estimate?

A. No, sir; I cannot. I think the reason the contracts were divided up was for other commercial reasons than that.

Q. Just state what they were.

A. Competitive prices, deliveries, geographical location—in fact, all things that go to make up——

Q. But if you took a bid on your approximate estimate and included in your proposal all the sizes of hoops that you thought you would need, and took bids on that, those who did not make some of those could not bid on that entire proposition, could they?

A. If their mill was such that they could not make those sizes, they would only bid on the sizes they could manufacture.

Q. Do you recall any instance where you split up the contracts simply for the reason that some who did not make all the sizes made lower bids on what they did make, and that you divided up the award and made separate contracts for that reason?

A. I cannot recall any particular instance of that sort; no, sir.

Q. Well, can you recall any incident where you took bids for an entire contract embracing all kinds of hoops that you made, and got prices on that from any others except those who could make all of the kinds that you embraced in it?

MR. SEVERANCE: I will object to that as indefinite and not understandable.

(The question was repeated by the stenographer.)

THE WITNESS: I do not understand the question.

By MR. DICKINSON:

Q. You already stated, I believe, that for your estimated yearly needs you took bids or prices on those estimated needs and covered the purchases by contracts; is that correct or not?

A. That is correct.

Q. In those estimated needs did you include all of the classes of hoops that you thought you would need, and the approximate quantity that you would need of the various kinds?

A. That was my idea.

Q. Did you take prices from manufacturers on that as an entirety?

A. When they were in a position to supply bids on the entirety.

Q. Did you submit in any way such a proposal or take bids from any who were not in a position to supply everything embraced within that?

A. I did.

Q. Then can you give, for any year, any instance where you split up the contract and did it for the reason that some who could not make all those things made a lower bid on some of the articles than others who could make all of them?

A. No, sir; I would not place any contracts on that basis.

Q. How would you place them?

A. Based on competitive prices, and based on ability to deliver and geographical location. I answered that before.

Q. You did understand my last question, didn't you?

A. Yes.

Q. Take the year 1911, and take your estimated requirements for that year of the various kinds of steel hoops that you used, do you know any concern that year that made a bid on any part of those requirements, which concern was not in a position to make all of the different kinds embraced in your estimated requirements?

A. I do not recall.

Q. Do you recall for any such year any such state of facts?

A. No, sir.

Q. Did you purchase from Carnegie for the years 1903, 1904 or 1905 or all of them, hoops?

A. From Carnegie alone?

Q. No, not from him alone, at all.

A. I cannot say whether in the year 1903 I purchased hoops from the Carnegie Steel Company.

Q. How about 1904?

A. The same answer would apply to that, I should think.

Q. What is the first year that you have a distinct recollection that you did purchase hoops from them?

A. From absolute emphatic knowledge I should say 1912.

Q. That is as far back as you care to say that you distinctly remember?

A. Yes; that is as far back as I would care to trust my memory.

Q. In that year how much hoops did you buy from them?

A. I could not say.

Q. Can you give the percentages you got from them?

A. I should say the average range from the Carnegie Steel Company, when we placed contracts with them, would run from 60 to 70 per cent. of our requirements on hoops.

Q. That is the only year you recall?

A. Yes; I do not recall definitely as to the quantity I placed the contract for.

Q. Well, would you say that you did continue to buy from Carnegie in all those years, to buy that proportion of your requirements in hoops?

A. It is impossible for me to answer that question.

RE-DIRECT EXAMINATION

By Mr. Severance:

Q. You said a moment ago, in answer to Judge Dickinson, that the first year that you remember definitely purchasing from Carnegie was 1912. Do you mean to testify by that that it was the first year that you did buy from them, or that you cannot remember any particular year?

A. I meant the first year I purchased from them, that I remember, and I would not care to go back farther and name any particular year.

Q. But you did not begin your purchases from Carnegie in 1912?

A. No, sir.

Q. You bought in previous years from these various concerns that you mentioned on your direct examination, did you?

A. Yes.

Q. So also, when you gave the answer to Judge Dickinson as to the probabilities that you purchased from certain concerns, naming three or four of them, do you mean to testify that you do not know that you bought from some of those concerns during those early years, or do you mean simply to say that you do not recall the particular year and the particular company that you contracted with in that year?

A. I do not recall any particular year or any particular company that I contracted with that year.

Q. But you know that you bought from the various concerns that you named covering that series of years; is that right?

A. Yes.

Q. That is, from one or another in different years?

A. Yes.

MR. DICKINSON: That is what I wanted to get at, because the way it stood he bought from all of them every year.

MR. SEVERANCE: No.

By MR. SEVERANCE:

Q. You spoke of some kind of wire that was made, so far as you know, by Igoe Brothers and the American Steel & Wire Company. What is the character of that wire, what is it?

A. It is called caster pin stock.

Q. What is the peculiarity of its manufacture, if you know?

A. I am not a wire manufacturer, but I will endeavor to give the use of it. It is open hearth basic wire, and under certain heading machines in which it is used, if it is either too hard or too soft, it becomes crystallized and breaks in the use to which it is put in its manufactured state, and therefore we must be particular as to the quality we use as the basis.

Q. Are there other wires that are in fact used for the same purpose?

A. Yes, there are other wires that are used, and I did not mean to imply in my answer that that was the only wire manufactured for that purpose; I mean that is the only wire we care to use.

Q. You regard it as the best wire to use for that purpose?

A. Yes.

Q. But other manufacturers make wire that is sold in competition with that, which wire is actually used for a similar purpose?

A. Undoubtedly.

Q. When you spoke of quality as one of the ingredients in the competition, that comes in in that case?

A. Yes.

ROBERT D. SAMUELS

was called as a witness on behalf of the defendants, and being first duly sworn, testified as follows:

DIRECT EXAMINATION

By Mr. Severance:

Q. Mr. Samuels, where do you reside?

A. New York City.

Q. What is your business?

A. Purchasing agent for the National Enameling & Stamping Company.

Q. What products does the National Enameling & Stamping Company make, Mr. Samuels?

A. Sheets and tin plate, and they manufacture them into kitchen utensils.

Q. At what places do you have factories?

A. Milwaukee; St. Louis; Granite City, Illinois; New Orleans; Baltimore; Long Island.

Q. Do you have offices in any other cities?

A. We have.

Q. Where?

A. Chicago and Philadelphia.

Q. As I understand, your company makes tin plate, and sheet steel, and manufactures kitchen utensils?

A. Yes.

Q. Do you manufacture those kitchen utensils from the sheet steel and tin plate that you make yourself to a certain extent?

A. A large proportion of it.

Q. Do you purchase tin plate and sheet steel in the market?

A. At times.

Q. Do you sell tin plate in the market?

A. At times.

Q. Do you carry on all the branches of your business at all the points you have named or is your business divided; that is, are the different classes of your business conducted at specific plants?

A. There is a sales agent at each of those points.

Q. I am speaking of the manufacturing business.

A. What is your question?

Q. I am asking you whether you conduct all your lines of manufacture at each of these places where you are located, or only certain of them, and if not at all of them, will you kindly name the places at which you manufacture the different articles you have mentioned?

A. In Milwaukee; St. Louis; Granite City, Illinois; New Orleans; Baltimore and Long Island.

Q. What do you make at those places? Do you manufacture all those things at all those places?

A. Yes, sir.

Q. I do not think you get my question. Where do you manufacture tin plate?

A. Granite City, Illinois, only.

Q. Where do you make sheet steel?

A. Granite City, Illinois, and St. Louis.

Q. Where do you manufacture kitchen utensils?

A. At every point but Chicago and Philadelphia.

Q. You manufacture kitchen utensils at St. Louis, Granite City, New York, Milwaukee, Baltimore and New Orleans?

A. Yes, but our New York factory is on Long Island, so that there won't be any misunderstanding there.

Q. How long has the National Enameling & Stamping Company been in business?

A. Since 1898.

Q. Has it grown during that period?

A. It has.

Q. Have you had plants at all these different places during all that period?

A. No.

Q. You have built or acquired plants at different places during that period?

A. Yes.

Q. Do you purchase for use in your factory any kind of steel products other than tin plate and sheet steel?

A. I do.

Q. What products?

A. Wire, hoops and bands, strip steel, pig iron. I believe you said otherwise than tin plate and sheet steel?

Q. Yes, other than tin plate and sheet steel.

A. That is right.

Q. Have you blast furnaces?

A. No.

Q. Have you open hearth furnaces?

A. We have.

Q. Where?

A. Granite City, Illinois.

Q. How many open hearth furnaces have you?

A. Four.

Q. And you buy pig iron for use in those open hearth furnaces?

A. We do.

Q. What do you do with ingots that you make in those open hearth furnaces?

A. Roll them into sheets.

Q. Have you a sheet mill at Granite City also?

A. We have.

(Whereupon a recess was taken until two o'clock p. m.)

AFTER RECESS.

ROBERT D. SAMUELS,

the witness under examination at the taking of the recess, resumed the stand.

DIRECT EXAMINATION (Continued)

By Mr. Severance:

Q. How many tin mills have you? Do you remember?

A. I think it is twenty-four; either twenty-four or twenty-six, I am not sure.

Q. Do you consume at all times all the product of your sheet and tin mills?

A. We do not.

Q. What do you do with the surplus?

A. We sell it.

Q. Where?

A. In the St. Louis market.

Q. Is that a large or small percentage of your total product of tin plate?

A. It varies from our having to buy more or less tonnage ourselves to selling it.

Q. Is it the purpose of your company as far as possible to make its own tin?

A. To make all that we need and use all that we make.

Q. But as a matter of fact you sell some in the market and you also buy some?

A. Yes.

Mr. Dickinson: Does that apply to tin and sheet both?

The Witness: Yes.

Mr. Dickinson: I mean by sheet sheet steel.

The Witness: Yes.

By Mr. Severance:

Q. From which of the manufacturers of wire have you during the last ten years purchased your supplies?

A. The American Steel & Wire Company; Wickwire Brothers; Igoe Brothers; John A. Roebling's Sons Company.

Q. Have you bought anything from the Pittsburgh Steel?

A. Yes, sir; the Pittsburgh Steel Company.

Q. What manufacturers other than those you have named, if any, have solicited your trade during that time?

A. The Cambria Steel Company.

Q. I am speaking now of wire products.

A. Yes; the Cambria Steel Company; the Wright Wire Company; Jones & Laughlin; the Southern Steel Company—they are now the Southern Steel Company; they used to be the Alabama Steel & Wire Company.

Q. About how large a tonnage of wire do you use annually? Can you state?

A. Approximately 3,000 or 4,000 tons.

Q. In what way do you purchase that; under contracts covering your yearly or a portion of the yearly requirements or tonnage contracts, or in the open market?

A. A good share of it under contracts of three and four months' periods.

Q. In placing contracts for wire, what has been your practice as to receiving bids to furnish that wire?

A. To cover the market as to prices.

Q. What does that expression mean—"cover the market"?

A. To get prices from all manufacturers.

Q. Have your contracts for wire been let on a competitive basis?

A. They have.

Q. Have the prices quoted to you by wire manufacturers been uniform or varying?

A. Varying.

Q. That is, the prices quoted in response to these requests?

A. Yes, varying.

Q. Has that been so during all that period, the last ten years practically?

A. Yes.

Q. Take your requirements of tin plate and sheets, so far as you have purchased; you say you have made purchases of a certain amount of sheets and tin plates?

A. Yes.

Q. From what concerns have you purchased?

A. The American Sheet & Tin Plate Company; the Phillips Sheet & Tin Plate Company; Jones & Laughlin, and the Pope Tin Plate Company; that is as far as tin plate is concerned.

Q. Take sheets.

A. Follansbee Brothers, and all these others possibly on

sheets. The former list on sheets, with Follansbee added to it on sheets, and the Inland Steel Company.

Q. All that you have so far named you have purchased both sheets and tin plate from except Follansbee?

A. Beginning with Follansbee and back of that are tin plates; all are on the sheet list.

Q. That is, from Follansbee you have bought nothing but tin plate?

A. Nothing from them but sheets.

Q. Let me see if I understand you. The American Sheet & Tin Plate Company; Jones & Laughlin; Pope and Phillips; they are tin plate only?

A. That answers your tin plate question.

Q. Now, on sheets, take the whole list as you have got it.

MR. DICKINSON: That is, these people, adding Follansbee and the Inland?

THE WITNESS: Yes.

By MR. SEVERANCE:

Q. That is, from those four you buy sheets, and also buy sheets from Follansbee and the Inland?

A. And there is a whole string of sheet men that I do not remember the names of, that I have figured with from time to time.

Q. Have you secured your supply of sheets in the same way as your supply of wire?

A. Always the same way.

Q. And tin plate likewise?

A. Tin plate likewise.

Q. What has been the condition of the market as to sheets and tin plate; that is, as to being competitive or otherwise during the last ten years, the period you mentioned as to wire?

A. Always on a competitive basis.

Q. Did the different makers, when they quoted prices to you when you were in the market for those products, quote you identical or varying prices?

A. Sometimes identical, but as a rule there was a variation.

Q. What are your requirements of tin plates and sheets that you buy from outside mills?

A. They vary from 100 tons a year to 2,000 tons a year.

Q. Which classes?

A. Tin plate.

Q. How about sheets? Between what minimum and maximum would they run?

A. That would be less; that is a small percentage—say two or three hundred tons a year, or less.

Q. Have you ever bought any sheets from the Youngstown Sheet & Tube Company?

A. I think we have, a small lot here and there. I have figured with them, and I think we have bought from them.

Q. Take your requirements of hoops and bands: From whom have you purchased your hoops and bands during the period last mentioned?

A. The Carnegie Steel Company and the Sharon Steel Hoop Company, and the Republic Iron & Steel Company.

Q. Have you bought anything from the Pittsburgh?

A. I have figured with Pittsburgh, but I think we have bought nothing from them.

Q. Have you bought anything from the West Leechburg Steel Company?

A. Not strictly in hoops and bands.

Q. Not in hoops and bands?

A. That is the same classification, until you get into strip steel.

Q. You have bought nothing from the ones I have mentioned?

A. No.

Q. In what way have you made your purchases of hoops and bands; by contract or otherwise?

A. Contract and otherwise both, but as a rule under contract.

Q. In what way have you proceeded to secure your supply?

A. The same method.

Q. By bids the same way?

A. By bids the same way, covering the condition of the market.

Q. And what has been your experience with these different

manufacturers when you have asked for bids; have they quoted identical or varying prices?

A. Varying; sometimes identical, but as a rule varying.

Q. Take your requirements of strips: From whom have you bought them?

A. The American Steel & Wire Company and the American Tube & Stamping Company; the West Leechburg Steel Company, and then there is a concern in Leonoria, I believe.

Q. What State is that in?

A. The reason I am not clear on that is that I buy from the New York agent, and I did not charge my mind with it.

Q. Do you know where their plant is?

A. Somewhere in Pennsylvania; I am not sure of that. They are one of the largest in that line.

Q. You are sure you have the name right?

A. I would not answer to that. That is as near as I can give it.

MR. COLTON: Why don't you get the name of the agent?

THE WITNESS: I do not remember the name.

MR. SEVERANCE: If you recall it you will let us have it?

THE WITNESS: I am the weakest on names of anything going. It is always a burden to remember.

By MR. SEVERANCE:

Q. What are your annual requirements in strip steel?

A. That is not very much; 300 to 500 tons.

Q. I do not think I asked you your annual requirements in hoops and bands.

A. About 1,000 tons a year.

Q. In what way have you purchased your strip steel?

A. The same way, competition.

Q. And you have bought that on a competitive basis, the same as the other articles?

A. The same as the other articles.

Q. And have the different manufacturers quoted you identical or varying prices?

A. Decidedly varying prices on that item.

Q. What would you say as to whether the competition between the various manufacturers in these various lines that

you have been interrogated about has increased or decreased in the last ten years?

A. Increased constantly, I should say.

Q. Now, in selling whatever sheets or tin plate you have to sell, what has been your experience as to whether you had to make your sales on a competitive basis?

A. That is entirely outside of the purchasing department. That is handled by the sales department in St. Louis.

Q. You have nothing to do with it?

A. I am the purchasing agent.

Q. Is your company one of the largest concerns in the line of finished product that you sell?

A. We are in what we sell. That is, in our manufactured articles. You do not mean tin plate and sheet?

Q. No, I mean of your products?

A. In finished products, kitchen utensils, we are the largest.

Q. Where is your market for kitchen utensils?

A. In the whole country.

Q. What do you say as to whether competition between the different mills that are soliciting your business as you have stated has been aggressive or otherwise?

MR. DICKINSON: That is excepted to as calling for an opinion of the witness.

THE WITNESS: Very aggressive.

MR. SEVERANCE: That is all.

CROSS EXAMINATION

By MR. DICKINSON:

Q. You say your office is in New York City?

A. Yes, sir.

Q. How long have you been located in New York City?

A. About 14 years.

Q. You are the purchasing agent for the National Enameling & Stamping Company?

A. Yes, sir.

Q. This company has factories located at different places?

A. Yes, sir.

Q. Are all the purchases for all that they consume in the lines that you speak of made here in New York?

A. Practically.

Q. You say practically?

A. If they wanted a dozen lead pencils they might be bought in Milwaukee.

Q. We are not talking about lead pencils.

A. That is one of the things that would have to be bought.

Q. No, I said all the things that you have been questioned about here. The articles that you have been speaking of buying from manufactories?

A. Everything in that line, yes.

Q. You buy everything in that line?

A. Yes, sir.

Q. No matter where the delivery is to be?

A. Yes, sir.

Q. And have you been buying throughout that time?

A. I have.

Q. You say you have one concern in Milwaukee?

A. Yes, sir.

Q. What does that consist of?

A. It is known as a tin ware manufacturing plant.

Q. When did you acquire that plant?

A. That went in the original combination.

Q. What original combination?

A. Of the National Enameling & Stamping Company.

Q. What do you mean when you say a combination?

A. Whatever property the National Enameling & Stamping Company acquired when they became organized.

Q. And it became organized in 1898?

A. 1898, I believe.

Q. A corporation then?

A. Yes, sir.

Q. Did it take over certain plants and properties at that time?

A. It did.

Q. Just state what they were and where they were located?

A. One plant in Milwaukee, two in Brooklyn, one in Baltimore; the old St. Louis Stamping Company in St. Louis and Granite City, and later on built one in New Orleans.

Q. They only built one of these?

A. They built one in New Orleans.

Q. The others you took over at the time, you say, of the combination?

A. Yes, sir.

Q. Now take these companies in the order in which you have mentioned them; I mean these properties, who did they belong to?

A. Kieckhefer Brothers in Milwaukee.

Q. Was that a corporation or partnership?

A. That was a corporation.

Q. How did you acquire that property?

A. That is outside of my department as purchasing agent.

Q. But you know it was a corporation?

A. I know it was because that was the old concern I was with.

Q. That was the plant you were with?

A. Yes, sir.

Q. At the time of the combination did you go over at the time that was taken over into the new concern?

A. I did.

Q. What did this concern at Milwaukee make?

A. It made a line of tin ware, and what is known under that head.

Q. A general line of tin ware?

A. That includes galvanized ware, japanned ware, stamped ware, what is known as ordinary tin ware.

Q. Where did they sell those goods?

A. Mostly in the central West.

Q. Generally outside of the State of Wisconsin?

A. Yes, sir.

Q. What is the next concern that you mentioned?

A. The St. Louis Stamping Company.

Q. What did they make?

A. Tin ware and enameled ware.

Q. Made the same kind of things that the other concern made?

A. Yes, sir.

Q. Where did they sell?

A. Mainly in the Southwest.

Q. Did they sell some in the same territory that the others sold in?

MR. SEVERANCE: That is objected to as immaterial and not cross examination.

THE WITNESS: Yes, because they made a line of enameled ware that was made only there.

By MR. DICKINSON:

Q. But did they make anything besides that enameled ware?

A. Tin ware.

Q. Where did they sell the tin ware?

A. I should say right in the southwestern territory; that I do not know.

Q. What do you mean by southwestern territory?

A. St. Louis and southwest from there.

Q. Can you give something more definite than that?

A. I do not know anything about their business up to that date.

Q. What was the next concern that you mentioned?

A. Matthai, Ingram & Co., of Baltimore.

Q. What did they make?

A. Tin ware.

Q. Where did they sell their goods?

A. In whatever they considered their territory. I am not familiar with their business at that time.

Q. What is the other concern?

A. Haberman Manufacturing Company.

Q. Where are they located?

A. Long Island.

Q. What did they make?

A. Practically the same line.

Q. Where do they sell it?

A. I have nothing to do with that phase of it.

Q. That was all except the one you built in New Orleans?

A. Yes.

Q. And that was built by your company after it was organized?

A. Yes.

Q. And you say that that concern is the largest in its line in the country?

A. Supposed to be.

Q. Was it so in 1898 or 1899?

A. I think it was.

Q. And has continued so; is that correct?

A. I believe it has.

Q. When did you build your furnaces?

A. Well, if I attempt to answer that I would be guessing, because that is outside my department.

Q. Don't you know approximately when it was built?

A. I could guess at it if that is what you want.

Q. How?

A. I might guess at it; I practically do not know.

Q. You did all the buying, didn't you?

A. Yes, sir.

Q. Well, your furnace made something, didn't it?

A. Yes.

Q. After the furnace started operation you did not buy as much of the kind of thing it was making as you did before, did you?

A. Will you ask that question again?

Q. What did your furnace produce?

A. Steel.

Q. The open hearth furnace produced steel?

A. Yes.

Q. Well, you had bought all the steel that had been used up to that time, had you?

A. We do not buy steel.

Q. No, before you started your furnace, didn't you buy steel?

A. We had a furnace at the start.

Q. What start?

A. At starting there, the organization of the company.

Q. You had these furnaces then?

A. We had some of them.

Q. Did you build them or buy them?

A. We bought them.

Q. From whom?

A. They were part of the St. Louis Stamping Company's property.

Q. You had those furnaces practically from the time this combination was formed?

MR. SEVERANCE: He said he had part of them.

THE WITNESS: Part of them.

By MR. DICKINSON:

Q. And some you added afterwards?

A. Yes.

Q. When did you make these additions?

A. I do not know. I could guess at it, but that is outside of my department.

Q. How long, as nearly as you can state, after this combination was formed, before you built these additional furnaces?

A. As I said, I do not know.

Q. Can you give no idea of it?

A. We may have gone two years afterwards; it may have been one year after that, or it may have been three or four years.

Q. You cannot come any nearer than to say that it may have been one and it may have been four years after that?

A. No; I should say it was within the first three years.

Q. Before these additional ones were built, did you have to buy any of your sheet steel?

A. No.

Q. Did the other furnaces furnish all that you needed in sheet steel in your manufacturing?

A. Yes, sir, they did; with the exception of what we had coming. We had material bought outside.

Q. Already bought outside, you mean?

A. Yes.

Q. Before this combination?

A. Yes, sir.

Q. After the combination was formed?

A. That is the period you are talking about. This outside contract ran over the period you are talking about.

Q. How far did it run?

A. A year or a year and a half.

Q. After that contract expired, did you have to buy any sheet steel or tin bars? You made tin bars, did you?

A. Yes.

Q. Did you have to buy any of them, or did these furnaces supply all your needs?

A. They supplied the needs.

Q. How long did they continue to supply practically all your needs in sheet steel and tin bars?

A. They had practically supplied all since we had started over that first year and a half.

Q. But I am trying to get you to state from that time down to the present time: How near have you come to manufacturing all of your requirements in sheet steel and tin plate?

A. We have practically furnished it all, though there have been periods when we could not, and we bought.

Q. Then your purchases of that have only been periodical and in comperatively small amounts?

A. Now you are talking about tin plate and sheet steel?

Q. Yes; I am talking about both of them.

A. Yes.

Q. Can you name any period that you distinctly remember that you went into the market and bought on account of an insufficient supply of your own product? If so, just give the year when that occurred, and the amount that you bought of each.

A. I could not give the amount within the last three years. About three years ago, I should say.

Q. About two years ago?

A. About three years ago.

Q. Did it occur prior to that time?

A. No, sir; not in the sense that we bought a tonnage.

MR. SEVERANCE: I do not know what that means.

THE WITNESS: If you go out and buy a carload, that is not a tonnage. To go out and buy five or six thousand tons is a tonnage. You are talking about getting a tonnage outside.

MR. SEVERANCE: You did not limit your question, did you, Judge?

By MR. DICKINSON:

Q. What I want to get at is this——

A. That is what your question means, as I understand it.

Q. How far, down to three years ago, did you make your own supply of sheet steel and tin plate?

A. I answered the question there.

Q. I understood you to say—there seems to be some little confusion—that you made practically all you needed.

A. That is what I said.

Q. Could you give the percentage that you had to buy from the time of this combination down to three years ago?

A. No; I told you I could not.

Q. Can you state that in any year prior to that time you did go outside and buy?

A. I said yes I did, about three years ago.

Q. But back of that?

A. I think not.

Q. Three years ago how much sheet steel did you buy outside?

A. I don't know.

Q. How much tin plate did you buy outside?

A. I don't know. I don't keep track of the tonnages at all.

Q. Could you give any approximation of it?

A. It would be a matter of guesswork.

Q. You spoke of three years ago: Did you buy any two years ago on the outside?

A. Not to speak of.

Q. Nothing to speak of?

A. No, sir.

Q. Two years ago would be 1911, would it not?

A. 1911.

Q. Take 1912.

A. Not to speak of; although there were small lots bought, you understand, from time to time. That does not involve a tonnage.

Q. What do you mean when you say that it does not involve a tonnage?

A. Because a car or two is not any tonnage or any quantity to speak of. You are getting at an outside purchase of a quantity, I take it.

Q. What I am trying to get at is whether or not, except the year that you mentioned, three years ago, you bought on the outside any sheet steel or tin plate of any consequence as compared with the whole amount that you used in your business for that year?

A. Not of any consequence, no.

Q. The first year after you were organized, did your company make any black plate?

A. It did.

Q. Did you sell any black plate in the market that year, outside?

A. I think not.

Q. You used it all for your own purposes?

A. We did.

Q. How about the second and third and fourth and fifth year of your organization, as to selling black plate?

A. I should say during those particular periods we practically sold nothing.

Q. How about tin plate?

A. The same thing.

Q. You spoke of having contracts at the time this combination was made that ran over for something like a year or more. What did that cover—sheet steel and tin plate bars, one or both?

A. Tin plate and black plate.

Q. With what companies did you have those contracts?

A. The American Tin Plate and the American Sheet Company—in those days—before the consolidation.

Q. The American Sheet Steel?

A. The American Sheet Steel and the American Tin Plate.

Q. And they ran for something like a year and a half?

A. About a year. After we got it in, it carried over about a year and a quarter; but it was delivered in a year.

Q. It was delivered within a year?

A. It was delivered over one year's time, but it lasted for a year and a quarter.

Q. Part of the time had been consumed before your combination, but it ran for a year and a half, although actually they fulfilled it within a year?

A. It was for a year and taken within the year, but the stock lasted after we got it in stock over the period I mentioned, a year and a quarter.

Q. You got all the purchases delivered within a year, but it sufficed your needs for a year and a half?

A. Yes. That is what I said in response to your first question.

Q. Have I got that right now?

A. Yes; so as not to show any contradiction there.

Q. That contract that you spoke of for sheet steel, which you say was made with the American Sheet Steel Company, when was that contract made?

A. A year before the consolidation of the American sheet and tin plate plants of the country, or a few months before.

Q. Did you have a contract with one of its subordinate companies?

A. One of its subordinate companies.

Q. You had it then with one of the companies that went into it?

A. Yes.

Q. That is what I thought, because that company had not been formed at that time. Now, what company did you have it with?

A. I declare, when you come back to names, I cannot tell—several companies.

Q. Several companies?

A. Yes, sir.

Q. That went into the American Sheet Steel Company?

A. Yes.

Q. Now, take strips. In the year 1901 to what extent did your company buy strips?

A. We bought no strips at all practically, previous to three or four years ago, when we started a new line of goods that required strips.

Q. So that what you state in regard to competition on strips was confined to the last three or four years?

A. To the last three or four years.

Q. Take four years ago, do you know from whom you bought strips?

A. The parties named in the list I gave you.

Q. Did you buy from all those parties that year?

A. We bought from the various ones; I think over a period of three years we bought from all of them on and off.

Q. Were those under contracts?

A. No.

Q. Did you buy them from time to time?

A. We bought them from time to time, two or three carloads at a time.

Q. Were they frequently emergency orders to fill out your needs?

A. No, being a new business, and on account of the uncertainty of the tonnage required, I did not contract.

Q. Take that first year, about four years ago, what was the tonnage of strips that you bought?

A. I could not say; starting a thing like that, it may have been only one or two cars; it may have taken a year to get started in that line of business.

Q. In that year do you know whether you divided up the two or three cars among these different people and if so in what proportion?

A. No; a carload at least was placed at a time; nothing less. There is no division there.

Q. Well, if you bought one or two cars you bought from one or two people?

A. One or two people.

Q. In that period four years ago, do you know the one or two people that you bought strips from?

A. I am not sure; it may have been the American Tube & Stamping Company.

Q. And might it have been the American Steel & Wire Company?

A. No, I do not think so. In fact I know it was not they.

Q. You know it was not the American Steel & Wire Company?

A. Yes.

Q. It might have been the West Leechburg Company?

A. It might have been, but I doubt it.

Q. It might have been the company at Leonoria?

A. I know it was not with them. I think it was with the American Tube & Stamping Company.

Q. Now, do you recall the price that you paid?

A. No, I don't remember the prices.

Q. Do you know when the contract or contracts were made?

A. There was no contract.

Q. How did you go about making the purchases?

A. Getting the prices, and giving the order to the man that I determined on.

Q. You do not know at what prices you awarded those contracts?

A. I do not remember the various prices.

Q. Do you remember the various bids that were made, and who bid?

A. I know who bid, yes.

Q. On those particular contracts?

A. Only down to that four years ago; I could not say that I asked prices previous to that four years, because I might not have heard the names of them four years ago; maybe I did not know whether they were competitors in that line.

Q. I want to know what you carry in your memory?

A. I carry nothing there that I can keep out of it.

Q. Then I want to know how much you keep out of it.

A. All right.

Q. Do you keep out of your memory the prices that were given to you?

A. I do not attempt to keep track of that at all after the deal is closed.

Q. And you do not have any memory about it after the deal is closed?

A. I am not very apt to; it is a thing I do not charge my mind with.

Q. You do not charge your mind with it?

A. No.

Q. And you dismiss that whole subject from your mind when you make the contract?

A. Yes, when I want to know anything about it I go to my assistant for it.

Q. You are speaking of what you remember?

A. I am speaking of what I forgot, Judge, I think.

Q. That is a better way of putting it; I accept the amendment.

A. That is what I am helping you out on; that is my faculty of forgetting what I do not want to be burdened with.

Q. You have a faculty of forgetting except that you bought one or two carloads three or four years ago?

A. The important thing of getting the next one I do not forget, and how to get it.

Q. And you do not know certainly whom you got that from?

A. I told you that I thought it was the American Tube & Stamping Company. You wanted me to guess at it, and I think that it was the American Tube & Stamping Company.

Q. I wanted to draw a contrast between what you thought and what you carried in your mind as a remembrance.

A. I am guessing at it; I think it was the American Tube & Stamping Company.

Q. Take three years ago.

A. Practically the same story there.

Q. How about two years ago?

A. Practically the same story there.

Q. A year ago?

A. This past year, this present year, you mean?

Q. Yes.

A. I can be more definite there.

Q. I mean the year 1912.

A. Well, call that say from the last of July, 1912, up to this July?

Q. No; I mean July of 1911 to July, 1912?

A. I think I can answer that question. There was a division between those four concerns; one would get it one time and one another. I think I have had it from all of them.

Q. During that year?

A. Yes; it may not have been a year, but at least eighteen months, we have bought from all of them.

Q. Did you have contracts with them all at the same time?

A. No contract placed on it at any time.

Q. No contract at any time?

A. There were carloads at a time given to one concern.

Q. None of your strips were bought under contract?

A. None whatever.

Q. That was a very small part of your business, was it not?

A. Yes; it is a new item and a small one.

Q. Now, take the hoops and bands in the year 1901, do you know from whom you bought hoops and bands?

A. The Carnegie Steel, or it was the American Steel Hoop Company then, I believe, and the Carnegie Steel Company now—the same concern.

Q. Did you buy all of your requirements from them?

MR. SEVERANCE: I object to that as not cross examination.

THE WITNESS: 90 per cent. of it.

By MR. DICKINSON:

Q. How long did you continue to buy 90 per cent. from that company?

A. Well, I think I bought as far as I could, all I could get from them ever since.

Q. So your purchases of hoops and bands from others than the Steel Company have been comparatively small?

A. 10 to 15 per cent., not to exceed that.

Q. And that has continued from year to year?

A. It has continued from year to year; of course, it has varied from year to year more or less.

Q. But it has varied within the percentage that you have mentioned?

A. Yes; ten to fifteen per cent.; it may have gone one year to twenty per cent., but practically ten to fifteen.

Q. You are giving that as your estimate of the maximum and minimum of the variations, are you not?

A. Yes.

Q. Now, take wire in 1901. From whom did you buy your wire?

A. The American Steel & Wire Company mostly.

Q. What percentage did you buy from the American Steel & Wire Company?

A. I suppose 85 to 90 per cent. or over.

Q. From that time down to the present time, how has that percentage run?

A. Substantially that.

Q. So throughout this whole period you have given you have bought practically from 85 to 90 per cent. from the American Steel & Wire Company right along from year to year?

A. Yes.

By Mr. Severance:

Q. You bought from those companies because you were satisfied with the prices named you, and found them entitled to the business, under the manner of contracting you have stated?

A. Yes.

Q. The product has been satisfactory?

A. Always.

WADDILL CATCHINGS

was called as a witness on behalf of the defendants, and being first duly sworn, testified as follows:

DIRECT EXAMINATION

By Mr. Lindabury:

Q. Mr. Catchings, where do you live?

A. I live at 84 Davis Avenue, Staten Island.

Q. Were you ever connected with the Milliken Brothers Company?

A. Not with the company. I was connected with the receivers of the company after its failure.

Q. What was the date of the failure?

A. It was in June, 1907; June 11th, I think.

Q. What was your connection thereafter with the company or with the receiver?

A. There were three receivers. I was secretary of the receivers and in charge of the business. I had entire charge of the operations of the company.

Q. Who were the receivers?

A. August Heckscher, William L. Ward and J. Van Vechten Olcott.

Q. Did they continue the business?

A. They immediately closed down the business of the rolling mill but they continued the operations of the structural steel plant, that is, the bridge plant, throughout the entire receivership until they were ordered by Judge Holt to close down the business, and then they gradually cleaned up the work on their books prior to the end of the receivership.

Q. For how long a time under the receivers did you operate the business?

A. I operated the business substantially from the beginning until the end; that is, from June, 1907, to October, 1909, a little over two years, two years and a half, approximately.

Q. What was the nature of the business as it was carried on by you?

A. The principal business was the construction and erection of structural steel buildings and of bridges. We had a very important smaller portion of the business in the making of steel towers for the carrying of electric transmission wires.

Q. What was the extent of the business during the period that you managed it?

A. The business amounted to roughly about 40,000 tons a year, which would be about two and a half million dollars, I should say.

Q. How was it used?

A. How was what used?

Q. The tonnage. You put up buildings, did you?

MR. DICKINSON: He said he put up bridges and electric towers.

By MR. LINDABURY:

Q. Pardon me; I was duplicating the question. Were any large buildings put up during that time?

A. We put up the Singer Building; we put up the Gimbel Building uptown; the National City Bank downtown; we put up a number of stores and warehouses; put up a number of bridges over in Brooklyn. We put up the Federal Legislative Palace in Mexico; we completed the National Theatre in Mexico. We put up a number of sugar mills for the Emperor of Japan, I think it was, over in the islands of the Pacific somewhere. We did work in Buenos Ayres; we put up a building there. We did business on the Pacific Coast, put up a great many buildings in San Francisco, a great many buildings in Tacoma and Seattle, some buildings in New Orleans and along the sea coast; the towers were all over the country, primarily in California and in South and North Carolina.

Q. Did you confine your bridge building to the city of Brooklyn?

A. No, our business was principally the erection of buildings. We were not equipped to handle any large bridge work. We did some work here in New York City for the New York Central station here. We did some bridge building throughout the country, but it was only a small part of the business.

Q. Did you fabricate your own steel, or buy it fabricated?

A. No, we bought the raw shapes and fabricated it.

Q. Did you buy any fabricated material or fabricate it all yourself?

A. No, we bought some. We bought part of the material for the Federal Legislative Palace that was fabricated in Mexico, but I do not think we bought any material for use in this country; we fabricated it all.

Q. Where did you have your fabricating plant, or did you have more than one?

A. We had only one fabricating plant; it was on Staten Island, New York City.

Q. From whom did you purchase your structural shapes? I believe that term covers about everything in that line?

A. Plates and structural shapes.

Q. From whom did you purchase them?

A. We purchased very largely from Jones &. Laughlin and from the Bethlehem Steel Company. We also purchased some from the United States Steel Corporation; that is, from the Carnegie Steel Company. We purchased considerable amounts from the Lackawanna Steel Company; we purchased from the Eastern Steel Company, and some from the Phoenix Iron & Steel Company. Then we purchased plates from Lukens and Worth at Coatesville, and the Central Iron & Steel Company at Harrisburg. I think that substantially covers it.

Q. Were or were not all your purchases made on a competitive basis?

A. Yes, sir. If by that you mean did we solicit prices from various concerns before placing our orders, we did.

Q. Or in any other way, did you secure competition?

A. We endeavored to secure the closest we could get. We went after it very vigorously.

Q. How did you go about it?

A. We were constantly sending out inquiries from time to time for prices of steel. We would follow the trade papers and various sources of information. Whenever we were likely to have a very large order, I would go to one of the larger concerns, either Bethlehem or Jones & Laughlin or Lackawanna, and negotiate with them for a tonnage to cover the bidding on that contract, and we would use such figures as we could get as a basis for making up our proposition.

Q. Did the quotations that came in to you in response to the inquiries you have referred to agree or were they different?

A. There would of course be many of them that were equal; some of them, however, would be higher than the average, and in some cases they would be lower. The contracts were usually let lower than the prices that would be submitted to us, as the result of the negotiation.

Q. Was there ever any time when you could not by negotiations better the prices offered?

A. Not for large quantities. We frequently had to pay premiums for material which we required, that we could only get from one concern who happened to be rolling at the time. You appreciate you can not buy structural steel in the market at all times. You have to take it from the concerns that are rolling at the time you require it, and under such conditions we often had to pay a high price. We had to buy sometimes from stores; that is, material that was in stock and was not rolled from specifications; in which case of course we had to pay a premium.

Q. Were there any two concerns who quoted uniformly the same price?

A. You mean throughout the entire time?

Q. Or any considerable length of time?

A. There would at all times be prevailing prices that would be quoted to you from two or three or more concerns; these prices that would be reflected, for example, in the prices given in the trade papers as the market price; but I do not believe that at any time the prices were the same.

Q. Were those who were lower and those who were higher in their quotations uniformly low, or did they vary?

A. They varied to a considerable extent, but we bought in large quantities, and we could always buy in large quantities to advantage from large companies.

Q. Did you find that the condition of the mills at particular times, or of one mill or another, had to do with the quotations you were able to get?

A. That had a very great deal to do with it. Of course our relations were particularly close with the Bethlehem and Jones & Laughlin Steel Companies, and we almost invariably could get prices from them as good as we could get from any of the others.

Q. But my inquiry was intended to reach the question as to whether better quotations could ordinarily be gotten from the mill with slack orders, rather than from a mill already full with orders?

A. That was undoubtedly true. There was toward the end of the receivership very vigorous competition based upon

reduced tonnages in mills, and at that time it was just a question of finding which mill needed the business most.

Q. And is or not that generally a question of some account?

A. Yes, sir; it certainly is.

Q. A mill needs it most who has the fewest orders, I suppose, in the sense that you use that term?

A. Yes, sir.

Q. What was the percentage of your purchases during this period of the receivership from the Carnegie Company?

A. Very small. We never established any large contracts with them, and our specifications from them were of sizes that could be secured advantageously from time to time because of their rolling schedules.

Q. What was the percentage of your purchases from the Bethlehem, if you can give it?

A. I can give it roughly. I should say a quarter to a third of our requirements were bought from Bethlehem. That is of the special Bethlehem sections. Bethlehem had really stopped making the standard section at that time, and were just making the special Bethlehem section then.

Q. Did the Bethlehem sections compete with sections made for the same use by other competitors?

A. Yes; they not only competed with them, but they enabled us to compete very vigorously with them, because the special Bethlehem sections eliminated a great amount of fabrication work, and we could use a Bethlehem section in buildings without doing the work on it that we would have to do on a standard section.

Q. And did that stimulate competition in those particular shapes?

A. When we figured on those shapes and could get architects to accept them, we were able to put in much lower figures than we were able to put in on standard. Very frequently we would put in alternative propositions, based upon using standard sections or Bethlehem sections, in which case the proposition on Bethlehem sections would usually be lower. It almost always worked out a saving, a saving in drafting, and in shop work, in using the Bethlehem sections for loft building work.

Q. Was there close competition during this period in construction work?

A. I do not think we ever got a contract without having to sharpen our pencils, so to speak; that is, we had to get down and figure on it to the last dollar and revise our estimates frequently two or three times to see if there was any manner in which we could reduce our costs to get in line; and on any large proposition we frequently went back to the rolling mills, to try to get a lower estimate, and at times succeeded in getting lower prices, to permit us to reduce our price. The raw material cost in the structural steel business is so large that it determines to a considerable extent the price of your finished product, the fabricated steel. It is over fifty per cent. of the cost, as a rule.

Q. Who were your principal competitors in those days?

A. Our principal competitor, of course, was the American Bridge Company. Next to them our most vigorous competitor was the McClintic-Marshall Company, of Pittsburgh. Locally we had vigorous competition from the Hay Foundry Company, and Levering & Garrigues. Of course we had competition here with Post & McCord, but that was part of the American Bridge Company. That was the form in which the American Bridge Company competition appeared here.

Q. Before you go further, the concerns you have mentioned now are fabricators, and not erectors, are they not?

A. They took contracts for erection, sir.

Q. Do Levering & Garrigues?

A. Yes, sir; they do, right along.

Q. Then I did not understand it.

A. Not for general construction. They take contracts for the erection of their own material. I do not believe they take contracts for the erection of anything else.

Q. Subcontracts, then, I suppose they would be?

A. They will take a contract for the structural steel erected in place.

Q. I see. But you took contracts for the whole work, did you not?

A. Only in Mexico.

Q. Is that so?

A. Yes; we only took contracts in this country for the erection of our own material.

Q. I see.

A. So that when we would turn the building over we turned over the steel skeletons that you see.

Q. Your work was, then, of the same character as that of these other concerns you have named?

A. Oh, yes; we were direct competitors. In foreign countries we did do general erection work, because of the difficulty of sub-letting it.

Q. I fear I interrupted you in an unfinished answer. You were narrating concerns that were competing with you?

A. There was competition also from Cornell, before they failed here, and to a certain extent I think after their failure. Then a number of middle western concerns got into New York, into this territory, and the seaboard territory, that we could reach from New York,—a concern in Indianapolis, Brown & Ketchum, got here somewhat; a concern from Cincinnati, Schreiver—I do not remember the full name; and the Virginia Bridge Company came up here at times.

Q. Were Thompson & Starrett then competitors?

A. We did a very large building business with Thompson & Starrett; but they bought from us.

Q. They were not fabricators?

A. No, sir. Thompson & Starrett put up the Gimbel Building, but we sold them the steel and delivered it to them on the ground. Sometimes they buy their material and erect it themselves, and at other times they buy the material from you and erect it; it depends upon circumstances.

Q. How about the Hinkle Company. Did they fabricate too?

A. I think they were much smaller in those days than they are now. I have not been connected with the business for some time, but they were very small at that time.

Q. In those days?

A. Yes.

Q. They appear now to be a very considerable concern.

A. I do not believe that we felt them except in a small way.

Q. Did you ever observe any indication of combination between these manufacturers of plates and structural shapes to either fix or maintain prices?

MR. DICKINSON: This is objected to upon the ground that it is vague and indefinite and calls for a conclusion of the witness and an opinion based upon unrevealed facts.

MR. LINDABURY: You vary that objection now and then, Judge.

MR. DICKINSON: I think the substance is the same.

(The question was repeated by the stenographer.)

THE WITNESS: Well, I was of course familiar during that time with the general discussion which existed with regard to an arrangement between the manufacturers, resulting from the Gary dinners, and so forth, and there were times when our quotations from some of the companies were in accord with what I read. I never attended any of those dinners, and know nothing of them by direct knowledge. I always succeeded in getting our material sold to us without having the statements in the papers verified by the conduct of the manufacturer. Whether that was in violation of an agreement or whether there was no agreement, I never had any way of telling.

By MR. LINDABURY:

Q. I did not mean to inquire what you read in the newspapers, but whether or not in actual practice in your dealings you found that prices appeared to be controlled by agreement between the manufacturers?

A. The only possible way I could tell was whether I would be unable to buy, and I was not unable to buy at varying prices from time to time.

Q. That is what I mean. You found no unchanging prices maintained by the different manufacturers, on a level or otherwise?

A. As I say, there were frequently prices which were the same that came to us, but we negotiated frequently on ton-

nages and succeeded in getting large contracts at prices lower than had been originally quoted to us. The quotational prices varied; they were not always the same, by any means.

MR. LINDABURY: Take the witness.

CROSS EXAMINATION

By MR. DICKINSON:

Q. I believe you stated that the fact of your contracts being large gave you an advantage in getting a price?

A. I think so, yes.

Q. Well, you never belonged to a pool yourself?

A. No, sir.

Q. Or a combination?

A. No, sir.

Q. Is it generally understood that even though there may be a pool or combination there are sometimes some fellows in it that break away?

A. It has been so rumored, yes.

Q. And you do not know whether you got hold of one of those or not, when you got a low price?

A. We dealt with a good many different concerns, of course.

Q. However, you would get prices from the larger manufacturers of structural material, and a number of those bids would be practically the same?

A. You mean the quotations that would be made to us would be the same?

Q. Yes.

A. Yes, sir.

Q. Then you began to work around, and having a large job, you would get it by getting something below that price?

A, That is my usual experience in buying; I find that to be the case in everything.

Q. And you think your large contracts help you in doing that?

A. I think so If I can combine several prospective orders and purchase at one time, I do so.

Q. There is quite an advantage in having a large contract in the inducement offered by it?

A. I think so, yes.

Q. You spoke of vigorous competition manifesting itself. When do you say that was?

A. I think my expression——

Q. Wait; I will probably make it a little more definite.

MR. LINDABURY: Do you withdraw that?

MR. DICKINSON: Yes; take it out.

MR. LINDABURY: No, let it stand.

MR. DICKINSON: Very well, let it stand, if you want to cumber the record.

MR. LINDABURY: I do not often want to do it, but I do want to this time.

(The question was repeated by the stenographer.)

By MR. DICKINSON:

Q. I meant that part of your testimony where you referred to the end of your receivership, a very vigorous competition about that time. Now, give me the period of time by dates.

A. The rolling mills were pretty well filled up with business when we first started in, and along toward the end of 1908 or the beginning of 1909 prices were falling rapidly and the rolling mills were pretty vigorous after orders. It manifested itself to such an extent that the Bethlehem Steel Company and the Lackawanna Steel Company both took contracts for the delivery of the finshed products, and sub-let the fabricating to us, which was a very extraordinary situation. The steel contract for a lot of this work in connection with the New York Central station, along in the summer of 1909, was taken by the Lackawanna Steel Company, and they shipped the steel to our works and we fabricated it and returned it to them, and they paid us merely for the fabricating part. The Bethlehem Company did the same thing on the Gimbel Building, of which I spoke. They took a contract for the delivery of the fabricated material and contracted with us for the fabrication. They delivered to us, and we delivered it back to them.

Q. What caused that condition?

A. The price for the finished product got so low that we could not take them, and the negotiations usually worked themselves out in this shape: I would go to one of these concerns and say, "The price on this is getting to be so that I will not take it. If you will take it and let us do the fabricating for you, we will do it; we will not take a contract for the finished material." Bethlehem Company had a very small plant for punching beams, but they were unable to do any complicated work at all. The Lackawanna had no facilities at that time, or if so, they did not use them. I know there is a Lackawanna Bridge Company now, but I do not think it existed then.

Q. In those cases they simply employed you to do some work on the material which they themselves would use in construction?

A. Yes, and assemble the work and rivet it together, and do all the drawing work and engineering work.

Q. They used it in filling contracts which they had undertaken?

A. Yes, in finished shape; they delivered it in the shape in which we gave it to them.

Q. Now, you do not undertake to say, do you, that the rolling mills generally in this country were running up to full capacity?

A. I do not know.

Q. You have not undertaken to say that one way or the other?

A. No, sir.

Q. Now, your testimony that you have given, does it go to a period prior to 1907?

A. No, sir.

Q. Or just confined to the receivership?

A. I had no acquaintance whatever with conditions prior to that time.

Q. And so it is confined from June, 1907, to October, 1909?

A. Yes, sir.

Q. The competition was keener during the latter part of your receivership than it was when you began?

A. The prices were very much lower. There was a keen competition for our business even at the outset, but my use

of the word "vigorous" was indicative of the level to which prices had been reduced, and the prices were greatly lower at the end than they had been at the outset.

Q. It did not refer to any question of energy in soliciting business as compared with other periods?

A. No.

Q. And you were only contrasting prices over those two periods?

A. Yes, it is probably an unfortunate word to use, competition, but it is the manner in which I used it.

Q. And that was the sense in which you used it?

A. Yes.

Q. You spoke of trade papers. What did you consider the reliable trade papers so far as quotations of prices were concerned?

A. The Iron Age is the leading paper beyond question in my judgment, also the Iron Trade Review. Those two are the principal sources of information.

RE-DIRECT EXAMINATION.

By MR. LINDABURY:

Q. Did you ordinarily pay the prices quoted in the Iron Trade Review?

A. No, sir.

WILLIAM C. HULSHIZER

was called as a witness on behalf of the defendants, and being first duly sworn, testified as follows:

DIRECT EXAMINATION.

By MR. LINDABURY:

Q. What is your business?

A. I am employed by Harold McCalla as purchasing agent.

Q. What is the business of Harold McCalla?

A. Jobbers in iron and steel and various other material in the same line.

Q. Where is their place of business?

A. 444-46 and 48 Fairmont Avenue, Philadelphia.

Q. Is it a firm, corporation, or what?

A. It is a private individual, a firm, Harold McCalla being the only member of the firm.

Q. It is the business of Harold McCalla alone?

A. Yes, sir.

Q. How long has it been established?

A. He started business about fifteen years ago.

Q. How long have you been purchasing agent for this concern?

A. I started there about 12 years ago and I have been doing the buying for about ten years.

Q. Does the concern buy a few steel products or carry a general line?

A. We carry a general line of what they call merchant iron and steel.

Q. Is there any other concern in Philadelphia that carries such a diversity of steel products as yours?

A. There is no other concern in Philadelphia that carries such a diversity.

Q. Do you carry steel wire?

A. We handle some steel wire.

Q. How much of that do you handle a year?

A. About 600 tons.

Q. Do you carry wire nails?

A. Yes, sir.

Q. How much of that article do you handle in a year?

A. Approximately 300 tons.

Q. Do you carry flat cold-rolled steel?

A. Yes, sir.

Q. How much of that do you handle a year?

A. About 100 tons.

Q. Do you carry bars?

A. Yes, sir.

Q. Hoops?

A. Yes, sir.

Q. Plates?

A. Yes, sir.

Q. Sheets?

A. The heavier sheets, not what you call the light sheets.

Q. And structural shapes?

A. Some sizes.

Q. Some sizes of structural shapes?

A. Yes.

Q. Now, as to your wire, I suppose you carry an assortment of steel wire?

A. Assorted, yes, sir.

Q. A general assortment?

A. In the common wires.

Q. Where do you get it?

A. I get it from different mills all over the country, where quality and delivery count, and price. There are several different mills we buy from.

Q. Will you name the leading ones you buy from?

A. We buy from the American Steel & Wire Company. This is wire we are talking about, is it not?

Q. Yes.

A. American Steel & Wire Company, Pittsburgh Steel Company, John A. Roebling's Sons Company, Youngstown Sheet & Tube; they are the principal ones.

Q. Can you tell me about how your purchases have been divided between those companies during the last ten or twelve years you speak of—eleven years I think you said you had been buying?

A. Ten years. Do you mean the percentage to each company?

Q. What percentage of your total purchases has been from each company?

A. From each company by itself?

Q. Yes.

A. Taking each individual company?

Q. Yes.

A. That I could not tell you.

Q. Could you approximate it? Could you tell us about how much you bought in percentages, from the Steel & Wire Company?

A. About thirty-five per cent.

Q. And did you mention Jones & Laughlin?

A. No, sir.

Q. Well, Roebling's, you mentioned?

A. Yes, sir.

Q. What percentage of your requirements have you bought from Roebling's?

A. About fifteen per cent.

Q. Now, what other concerns did you name? Pittsburgh Steel?

A. Yes, sir.

Q. About what have you gotten from the Pittsburgh Steel?

A. About fifteen per cent.

Q. Have these purchases been made on a competitive basis?

A. They have.

Q. How have you obtained that competition?

A. Well, in buying our wire we of course look up the price first, and we take it up with the different mills and get their prices, but different mills make different qualities of wires, and the quality would count along with the price and the delivery in placing these contracts.

Q. Taking up the price first, how did you get it?

A. We would take it up with the different mills, submit the contracts we were going to place and get their figures on it.

Q. Have you found, in getting their figures in that or any other way that their quotations on wire have agreed or have varied?

A. They have varied most of the time, that is, in one way or another.

Q. Now, what do you mean by one way or another?

A. I mean by that that—one would either give you a better quality of wire at the same price, or you know you would get a better quality of wire from that particular mill at that same price than you would from another mill even though the prices were equal, and we would place it with the mill where we would get the best material.

Q. Disregarding differences in price arising out of differences in quality or of delivery, have quotations been uniform ordinarily, or variant?

A. They varied; covering it all, they vary.

Q. Take your nails, you get 300 tons of nails a year. Where do you get them?

A. From practically the same mills as wire, except John A. Roebling does not furnish nails.

Q. Have you bought your nails on a competitive basis?

A. Most undoubtedly.

Q. Why do you say most undoubtedly?

A. Because nails are one of the articles that are sold on the smallest profit, and you have got to buy where you can save a cent a keg.

Q. Have quotations on nails been obtained by you in the same way as upon wire?

A. Yes.

Q. And have they agreed or varied?

A. They vary.

Q. And have they been the same from time to time; that is, have they varied from time to time as well as between different bidders?

A. Yes. Take two bidders, suppose two bidders were the same on a contract for this year, next year those bidders would not be practically the same, that is what I mean by variant. In a bunch of quotations we would send out, or inquiries, there would be one or two that would be the same, but the next time it would not be those same two; it would hardly be the same again.

Q. Then there would often be two or three whose prices would be the same, but it would not be the same two who agreed on any two occasions?

A. Yes; that is what I mean.

Q. Well, how much variation is there in the quotations of these closely sold nails?

A. There could not be much, if 2½ cents a keg or anything like that, or even a cent a keg would take the nails.

Q. Was there that variation or more?

A. Oh, yes, there has been as much as five cents, sometimes more, but I don't rememebr just exactly.

Q. You buy from the high fellow, I suppose.

A. Not on nails.

Q. Well, about bars, where do you get your bars?

A. The Carnegie Steel Company.

Q. Did I ask you where you got your nails? You said the same except Roebling's, didn't you?

A. Yes, sir.

Q. Now, bars; anywhere else besides the Carnegie Steel Company?

A. The Republic Iron & Steel Company, the Lackawanna. May I ask a question?

Q. Yes.

A. When you are taking in bars are you taking in bands and other commodities, or just bars?

Q. Bands and other commodities if you handle them.

A. Of course you understand I mean some mill may have bars and hoops and bands altogether. Does this question cover hoops, bars and bands, or does it cover the bars alone?

Q. I meant it to cover bars alone.

A. They are all grouped together.

Q. Then you may group them.

MR. DICKINSON: Let us see what you are going to group.

THE WITNESS: Bars, bands, small shapes and hoops, they are all grouped together.

By MR. LINDABURY:

Q. I understand you group them now because you group them in purchasing?

A. Yes.

Q. You ordinarily purchase them all together?

A. We ordinarily purchase them all together with mills that make all sizes.

Q. Then you may group them in your answer, too. Where have you gotten them?

A. From the Carnegie Steel Company.

Q. And the Republic, you mentioned?

A. And the Republic; and the Sharon Steel Hoop Company; the Pittsburgh Steel Company, and the Lackawanna Iron & Steel Company. They are the main ones.

Q. Have you bought from all of them?

A. All of them.

Q. And has that been the case throughout this period of which you have spoken?

A. You understand in the beginning we were small, of course just starting in. We have grown, and we did not buy from as many in the beginning as we do now. In fact, they were not so anxious to sell us at that time as they are now.

Q. They are anxious to sell you now, are they?

A. Yes.

Q. Your trade has grown, has it?

A. Oh, yes.

Q. How much has it grown in the ten years you have been there?

A. Well, it started in possibly at that time with thirty to forty thousand a year.

MR. DICKINSON: What do you mean by thirty to forty thousand a year? Sales of thirty or forty thousand?

THE WITNESS: Yes.

By MR. LINDABURY:

Q. $30,000 or $40,000 a year?

A. Yes; at that time.

Q. How much is it now?

A. About $250,000 a year.

Q. Did you buy these bars and kindred grouped articles on a competitive basis?

A. Yes, sir.

Q. How comes it that you bought sometimes from one concern and sometimes from another?

A. That is accounted for in quality and delivery, and also in the price.

Q. Have the prices quoted on those articles also been variant?

A. Yes, sir.

Q. You did not mention plates and sheets in that group, did you?

A. I meant to group them. They are so small—as I say, we only handled the light sizes of sheets and of plates, very few.

Q. You have mentioned structural shapes?

A. Few of those.

Q. And the smaller shapes?

A. The small shapes; that came in with the bars.

Q. So that your answer covered all of those?

A. Yes.

Q. Has there been competition between these concerns for your trade on all of those?

A. Oh, yes, indeed there has been.

Q. Why do you say "yes, indeed"?

A. Because in our business we handle small sizes, on which there are, of course, extras for sizes, and it is very desirable for a mill. They like our business because in plates of these sizes it will average $5 a ton extra on much of the stuff we handle, and they come after us where they do not go after the base sizes, because there is not so much of it used, and they like to get the place that handles the stuff and will take it.

Q. Sometimes you give it to one and sometimes to the other? Is that because the prices were better sometimes from one and sometimes from the other?

A. It has certainly been so, that the prices were varying. For instance, if I am going to place a contract the first of this year, my contracts I have with several of them, the Republic, for instance, may run out, and it may be that I will have to pay them more than I am paying another concern for the same material; but at the time the contract was placed with the Republic, they were the lowest on that.

Q. That you state by way of illustration of your method of doing business?

A. Yes.

Q. Has there been any time during the ten years you have been making these purchases when there was not, as a matter of fact, free and active competition between these different producers for your trade in the materials which you say you purchased?

MR. DICKINSON: That is excepted to because it is not shown that the witness is qualified to speak as to the competition that existed between the manufacturers, or whether or not there

existed conditions and combinations among them unknown to the witness.

(The pending question was repeated by the stenographer.)

THE WITNESS: As far as I know, there certainly were. They all came after the trade. That is as far as I can say.

CROSS EXAMINATION

By MR. DICKINSON:

Q. You do not know to what extent this slight variation of one to five cents on a keg of nails may have been controlled by the fact of agreement or combination among manufacturers?

A. No, I do not.

Q. Do you know to what extent the American Steel & Wire Company, during any of the years as to which you have testified, that is, ten years, controlled the output of the nails, and the percentage that they controlled?

A. All I can say is that according to my purchases, I only purchased about ten per cent. of the nails that I bought from the American Steel & Wire Company.

Q. I did not ask what you purchased from them. I just asked if you happened to know, as a matter of general information in your business and in the trade, what percentage of nails was manufactured by the American Steel & Wire Company for any of the years as to which you have testified?

A. I can not say.

Q. When did you have full charge of the question of buying for this firm of Harold McCalla?

A. It is an individual; not a firm.

Q. You spoke of it as a partnership, did you not?

A. No, sir.

Q. Did you not use the expression "firm"?

A. No, sir. I said it was a private individual; that he was the only one in the business.

MR. LINDABURY: He used the term "concern," sometimes, as I did.

MR. DICKINSON: I thought he used the word "firm." I have it in my notes. That is not important, however.

MR. LINDABURY: No.

By Mr. Dickinson:

Q. At what time were you put in full charge of the purchases for that concern?

A. Some ten years ago. I grew into it as the business grew up. I grew with it, day after day and year after year, and today I have taken it all. In fact, I have always done it.

Q. You are not a partner in that concern?

A. No, sir.

Q. When did you begin with Harold McCalla?

A. 1901.

Q. What position did you have? What was it known as, then?

A. There were only two positions there, and they were himself and myself.

Q. You were not a partner?

A. No, sir.

Q. Were you the only employee?

A. I was the only employee, except the men that we hired to do the trucking and things of that kind.

Q. Did you keep the books?

A. I did.

Q. So in that business you and he were the whole thing, except the mere laborers that you had under you?

A. Yes, sir.

Q. That first year what was the extent of your purchases in nails?

A. As I can recall, nothing. That is the first year you are talking about, that I was there?

Q. Yes. That would be the year 1901, would it not?

A. Yes. That was the year I went there. In fact, I started in then. I grew on with the business. That is the year I went with them. I did what buying there was to be done.

Q. I want to ask you about the first year.

A. There were no nails sold.

Q. There were no nails sold, of any consequence?

A. No. We started in as an iron and steel business, and nails were taken in later.

Q. As an iron and steel business?

A. Yes.

Q. What experience had you had before that in the hardware business?

A. In the hardware business?

Q. Is not this a hardware business?

A. No, sir; iron and steel.

Q. What experience had you had in the iron and steel business before you went with this concern?

A. The only experience I had had was with the commission house of Middleton & Company.

Q. Commission houses?

A. Yes; selling nails on commission, and iron and steel on commission. That is the only experience I had.

Q. Is this a retailer or a jobber, this Harold McCalla?

A. A jobber.

Q. Don't you sell to the retail trade at all?

A. That is what we sell.

Q. Excuse me; I used the wrong term. You do not sell to the consumer at all?

A. We do not sell to the consumer. In the iron and steel business the jobber sells to the man that makes up the material, makes up the iron work.

Q. For instance, take nails: Do you handle nails, sell to anybody that wants them?

A. Yes, but principally to hardware stores.

Q. Do you sell both to jobbers and consumers?

A. At that time we did not sell any nails.

Q. But when you did sell any nails, did you sell both to jobbers and consumers?

MR. LINDABURY: You do not mean "jobbers"?

By MR. DICKINSON:

Q. Retail stores.

A. Principally to hardware stores, what they call the larger hardware stores; not small ones, they buy through a hardware jobber; but the larger hardware concerns.

Q. You also sold to consumers?

A. Where they would buy in a quantity.

Q. Take nails?

A. I say, where they would buy in a quantity.

Q. I want to know what you would call a quantity?

A. A carload we would call a quantity.

Q. You say the first year you handled nails was when?

A. 1906, as near as I can tell.

Q. 1906?

A. Yes.

Q. So what you have said as to prices in regard to nails does not go back of 1906?

A. No, sir; not beyond that.

Q. You had no experience in nails prior to 1906?

A. No.

Q. Now, what period in 1906 did you begin handling nails?

A. I could not say.

Q. You can not tell?

A. No.

Q. How many carloads of nails did you sell that year?

A. I could not say.

Q. Do you know that you sold as much as a carload of nails during that year?

A. I would not say.

Q. Take 1907.

A. The same thing would apply to that; getting down to specific quantities I could not say.

Q. I do not want specific quantities. I say carloads.

A. That is a quantity. To get down to quantity I could not say whether it was one or ten.

Q. So that in the year 1907 you do not know whether you sold one carload or ten, of nails?

A. No, sir.

Q. Do you know that you did sell as much as one carload?

A. Yes.

Q. You do?

A. Yes.

Q. Do you know that you sold as many as two carloads?

A. Yes.

Q. Do you know that you sold as many as three?

A. I could not say.

Q. That is as far as you can go?

A. Yes.

Q. That year from whom did you buy nails; that is, 1907?

A. The American Steel & Wire Company and the Pittsburgh Steel Company.

Q. Have you finished your answer?

A. Yes.

Q. Do you recall distinctly that in 1907 you bought from both of those companies?

A. To the best of my memory, I do.

Q. Do you remember that you did?

A. I say to the best of my memory.

Q. Have you any recollection about it?

A. Yes; that is where we started, with those two concerns. They were the first ones we bought from, and that took in the year 1907.

Q. What do you mean by saying "that took in 1907"?

A. I say that is when we first started to handle nails, and that is what makes me sure that those two concerns are the ones we got it from that year, because they were the first we started to buy nails from, those two concerns.

Q. But I understood you to say that you bought some in 1906.

A. I said I could not say how many, and as I say just now to this question—if he will read it—I say that 1907 took in those two concerns.

Q. For both years? What proportion did you buy from the American Steel & Wire Company and what proportion from the Pittsburgh Company?

A. I could not say that, because the quantity was so small that there was no proportion to it; we were starting with it.

Q. What was the quantity?

A. You have asked me that, and I told you I could not say. You asked me if it was as much as two, and I said yes.

Q. That was for the year 1906; I am talking about 1907.

A. The same thing applies to 1907, because I took no record of what we sold; I would not make a guess at it.

Q. I have not asked about 1907, and I will ask you now what quantity you bought that year.

A. I say I could not say.

Q. Do you know that you bought a carload?

A. Yes.

Q. Do you know you bought two?

A. Yes.

Q. Do you know you bought three?

A. Yes.

Q. Do you know you bought four?

A. Yes.

Q. Do you know you bought five?

A. No, sir.

Q. Four is as far as you know you bought?

A. Yes.

Q. What proportion of that did you buy from the American Steel & Wire Company and what proportion from the Pittsburgh Company?

A. About 25 per cent. from each.

Q. Where did you get the other 50 per cent.?

A. We had two other people that we bought from at that time.

Q. In 1907?

A. That is, there are two other concerns in nails, or one other.

Q. One other? What was that?

A. The Youngstown.

Q. In 1907?

A. Now, listen. You say in 1907. Is this the year we are talking about? I am talking about 1908. I gave you 1906 and 1907.

Q. I don't think I have mentioned 1908; I have not intended to.

A. You asked me for 1906 and 1907, because we lumped the two together.

Q. But I never intended to ask you about 1908, and if you want to correct anything you have said, I will give you an opportunity. Understand that I am asking for 1907.

A. Can I ask a question? You asked me——

Q. I will ask you again. We will not get into any argument. I will give you a fair chance to explain, a full oppor-

tunity. In 1907 how many carloads do you remember that you bought of nails?

A. As I told you, two. Those two years were lumped together.

Q. I am not asking about any two years; I am asking about one year now, and I hope you will not lump anything with it, because I do not want to confuse things, and if you will just answer about 1907 now and get other things away from your mind, I will come to 1908 later. Let us start now.

In 1907, state how many cars you remember that you bought—in 1907.

A. I am sure of two.

Q. Are you sure of any more?

A. I cannot say.

Q. From whom did you buy them in 1907?

A. The American Steel & Wire Company and the Pittsburgh Steel Company.

Q. Any others?

A. That is all.

Q. What proportion did you buy from the American Steel & Wire Company?

A. Fifty per cent.

Q. And what proportion from the Pittsburgh Company?

A. Fifty per cent.

Q. Well, now, for the year 1907, when you say you remember you bought two cars——

A. Yes.

Q. (Continuing) and divided them equally between the American Steel & Wire Company and the Pittsburgh Company, state whether that was purchased at one or more periods?

A. At more.

Q. At more than one?

A. Yes, sir.

Q. Were they by contracts? That is to say, did you enter into a contract for future delivery?

A. I think we had a contract at that time; that is when we started we had a contract with both of them.

Q. What kind of contracts did you have with them and when were they made?

A. That I could not just say, what date they were made, they were made during the year.

Q. During the year 1907?

A. During the year 1907.

Q. What was the nature of those contracts?

A. In what way?

Q. What quantity?

A. It was simply we were to buy so many kegs of nails from them in a stated period and they were to ship them.

Q. And did it state the price?

A. Yes, sir.

Q. Were they to ship you less than carload lots?

A. If we wanted them, that is, we were to pay for them.

Q. How?

A. We were to pay them for shipping less than carloads.

Q. You mean you were to pay them a larger price?

A. An extra price.

Q. And those contracts you say provided that you should take up to a certain amount; did those contracts run over the same period or different periods for the year 1907?

A. I could not say whether they were for the same or different periods. I do not know whether they were both placed together or not.

Q. You do not recall that?

A. No, sir.

Q. Do you remember the prices?

A. No, sir.

Q. As between those two companies?

A. No, sir.

Q. Well, when you bought from the American Steel & Wire Company do you remember the price that was made at that time if any price was made, by the Pittsburgh Company?

A. No, I do not remember the price made by the Pittsburgh Steel Company at the time I bought and placed the contract with the American Steel & Wire Company.

Q. When you placed the order with the Pittsburgh Steel Company, do you remember the price quoted by the American Steel & Wire Company?

A. I do not know now, no sir.

Q. You do not know what variation, if any, there was?

A. No, sir.

Q. Do you know if there was any variation?

A. That I do not know.

Q. Now take the year 1908, how many carloads do you remember that you bought in that year?

A. I could not say the exact number.

Q. Well, what can you safely say that you remember?

A. I would say three cars as a minimum.

Q. What would you say as maximum?

A. I could not say the maximum.

Q. Now, for the year 1908 with whom did you place your orders?

A. To the best of my knowledge with the American Steel & Wire Company, the Youngstown Sheet & Tube and the Pittsburgh Steel Company.

Q. Do you recollect that you did place that year with all of those companies, or are you just going on a general idea?

A. No, I am talking from my own memory of how we started with these concerns and how we got buying from the different ones at different times.

Q. Now, I want to know if you remember that actually in the year 1908 you bought from all three of those companies?

A. Yes, because our nail business was increasing and the wire comes in with the nails, you buy it in with nails. That comes in with nails, certain fence wire comes with nails.

Q. When you take your bids on a contract or order or proposition involving nails and wire, was the bid as an entirety covering the whole contract, or was it so much on wire and so much on nails?

A. So much on nails and so much on wire.

Q. In awarding that contract did you divide it up, giving one of them the contract on wire and the other the contract on nails?

A. No; as I said, the contract called for both nails and wire —one contract. That is, you could have either nails or wire on the one contract.

Q. But the prices would be different between nails and wire?

A. Yes, but I say the one contract would allow you to take the tonnage either in nails or all wire if you wanted it.

Q. Now, did you make such a contract as that for the year 1908?

A. To the best of my knowledge; yes, sir.

Q. With what companies did you make it?

A. This is 1908?

Q. Yes.

A. The three that I have just mentioned—the Youngstown, American Steel & Wire, and Pittsburgh.

Q. Were those contracts made at the same time or did they cover different periods of that year?

A. They would be made—one of them was, the first, Youngstown was the first contract made that year, and the others would be made as they ran out.

Q. You say the Youngstown would be the first one that was made that year; was it always first?

A. I mean the first contract with Youngstown, because it was the first year we bought from Youngstown.

Q. If that is the first year that you bought from Youngstown, is that the reason you say that the contract with Youngstown for that year preceded the contracts with the other two?

A. I did not mean to say it preceded. I said it was the first contract placed with Youngstown.

Q. You do not mean to say it was the first of the three executed that year?

A. No, sir.

Q. Let us find out how that was, if you know; what part of the year, if you know, did the cantract with the Youngstown people cover, and what part the contract with the American Steel & Wire Company, and what part with the Pittsburgh?

A. I could not tell you.

Q. Do you know the prices at which these contracts were made?

A. For 1908?

Q. Yes.

A. No, sir.

Q. When you let a contract with the Youngstown people, that was the first year you dealt with them, how did you go about it?

A. They solicited our trade, they came up and said they heard we were handling nails and wanted some of our business.

Q. Did you talk with them about it?

A. They talked to me about it, and I talked to them about it.

Q. Did you trade then?

A. Did I what?

Q. Trade then?

A. I gave them a contract.

Q. You gave them a contract?

A. Now, at that time I cannot say whether the price was the same as the contract I had. It must have been the same or better than I had, or I probably would not have given it to them.

Q. That you do not remember?

A. No, sir.

Q. But they did solicit you and after some negotiation you traded with them and gave them a contract?

A. Yes, sir.

Q. How long did that negotiation last—this negotiation that resulted in your giving them an order?

A. How long did it last?

Q. Yes; where did it take place, in your office?

A. Yes; possibly half an hour.

Q. Their agent came there?

A. He had been there several times.

Q. I am speaking of all the time that eventuated in this contract.

A. I could not tell you just how long it took.

Q. I do not suppose you can. What I wanted to get at is this; he came there and solicited you and talked over the matter and he told you his price and it was satisfactory to you and you closed with him, did you?

A. Yes, sir.

Q. And you do not know just what that was?

A. I could not say.

Q. And you do not know how it compared with other prices?

A. I know I would not have placed it if it had not been just as good or better and the nails had not been better—what I am speaking of is that I had had some complaints the year before of certain nails that we had furnished from one of these two manufacturers, and one of my customers suggested to me that I deliver to them the Youngstown nails.

Q. And you wanted that particular nail?

A. I wanted a contract with that particular mill to furnish their nails.

Q. And you thought the price was good or you would not have taken it?

A. I certainly thought the price was as good; as I say, it may have been the same. I would have given them the contract so as to be able to furnish this customer the nails that he wanted.

Q. And you were after that particular kind of nail at that time?

A. No, my customer was after them.

Q. You were trying to get what he wanted?

A. That is our business, to get what our customers want.

Q. But you do not remember the price as compared with other prices?

A. No, sir; I do not recall that at this time.

Q. Now, let us take the year 1909, how many nails did you buy that year?

A. I could not say as to the exact quantity.

Q. Now, I do not want to be unnecessarily prolix. Suppose I should ask you as to 1909 substantially the same character of questions I asked you for 1908? Would your answers be substantially the same?

A. The answer would be that we probably bought double the amount.

Q. But in all other respects would it be the same?

A. The same; our policy on our nails has been the same all the way through.

Q. Those nails have been held pretty close, haven't they, to a constant price for a long time, with a very slight margin?

A. You mean the price of nails has been the same?

Q. No, I do not mean constantly the same, but I mean there are long periods of time, months at a time, for long periods they had been the same, hadn't they?

A. No, sir; they had not.

Q. Is it not a fact that with the slight variation that would be gotten as you have explained, sometimes a cent to five cents off, that through months at a time, and consecutive months, the nails have been practically the same price?

A. That one to five cents would make a substantial difference.

Q. Yes, but allowing for that difference that you got at times, by negotiations, has not the price of nails for long periods of time been constant?

A. They have gone up and down. It has been one of the things that have gone up and down more than other things.

Q. Have they continued for long periods of time, months at a time?

A. At one price?

Q. Yes, without going up and down?

A. It may have been months at a time.

Q. Don't you know that they have?

A. I know of months that they have gone, months at a time in those years.

Q. Take the question of bands, small shapes, and hoops, in the year 1901: What was the extent of your purchases in those in tonnages?

A. In 1901, I could not say, because the business, as I say, was very small then. It would be better if you start in later years.

Q. I will get down to later years, before we get through.

A. At that time it was so small that it is hard to say.

Q. What year would you name as being a year when it was of sufficient amount to be material in your business, or a substantial amount? Would you name some year?

A. I should say 1906. That is the year we moved to our present location.

Q. In 1906?

A. Yes.

Q. Would you say whether or not before that the purchases had been inconsiderable?

A. Yes, I think they had been inconsiderable before 1906.

Q. In 1906 what was the tonnage of those articles combined?

A. I should say about 1,000 tons.

Q. What would that represent, about, in money value?

A. About $50,000.

Q. Take the year 1907: About what would it be, for those same articles?

A. I should say about 1,200 tons.

Q. For 1908 what would it be?

A. Let me get my bearings on that year, 1908. I should say that was about 1,200, the same as 1907.

Q. In 1909 it was about what?

A. Practically the same.

Q. In 1910 what was it?

A. About 1,500 tons.

Q. And in 1911?

MR. LINDABURY: I object to that because part of it is since the suit was brought.

MR. COLTON: In view of that, we had better say before October 26, 1911.

By MR. DICKINSON:

Q. Go ahead and answer, please.

A. In 1911, 1,700 tons.

MR. LINDABURY: Are you not going to ask how much of it was after October 26th?

By MR. DICKINSON:

Q. Bands, small shapes and hoops, you treated together in your other answers?

A. Yes, sir.

Q. Were they bought from manufacturers together, generally? That is to say, when you would make a contract, would the contract cover bands and small shapes and hoops?

A. Bars, bands and small shapes; they are on one list, and hoops is on another; but they all come in the same contracts. That is, a mill will make hoops and bands, but they will not make bars and shapes.

Q. They make hoops and bands?

A. But they all go on one contract.

Q. What do you mean by "go into one contract?"

A. For illustration, the Republic Iron & Steel Company will make bars, small shapes, bands, and a very few sizes of heavy hoops, but they will not make, at least they cannot make, light hoops.

The Sharon Steel Hoop Company can only make hoops and the heavy sizes of bands.

Q. How about the Carnegie?

A. The Carnegie people can make the same as the Republic, only that they can make all sizes of hoops.

Q. They can make the whole thing?

A. They can make all of it.

Q. You say all these things would go in under one contract. What do you mean by that?

A. We place one contract for so many tons, to be taken out in a specified time. The contract would start: Structural shapes at so much; bars and bands and small shapes at so much; hoops and bands at so much; that is, hoops, not bands, as bands go in with bars, small shapes and bands; hoops by themselves. They would all have different prices; that is, base prices; they are all sold on base prices. They all have extras for the different sizes.

Q. The Carnegie was the only one that could furnish all of those, was it not?

A. They could furnish all of the material. You mean the only mill that could furnish all?

Q. I understood you to say that.

A. No; the Republic Iron & Steel Company, I said, could furnish some sizes of hoops, but not all hoops. They could furnish everything else.

Q. But the Carnegie Company you said could make the whole thing, from beginning to end?

A. Yes; all sizes.

Q. And they are the only ones that could do that; is not that what you said?

A. The only single mill, the only individual mill that could take care of the whole thing, you mean?

Q. Yes; is not that what you said?

A. Let me get you right on this.

Q. Yes; do get me right, because evidently I do not understand you.

A. The Carnegie Steel Company could make bars, hoops, small shapes and bands.

The Republic Iron & Steel Company could make the same items, what you would call hoops, but they cannot make the same sizes that the Carnegie can, in all sizes.

Q. Is it not a fact that the Carnegie was the only one that could make all sizes of hoops, and make all of these other things?

A. If we had to get them all from one——

Q. I am not asking you if you had to do it, but if they were not the only ones that could do it.

A. Yes.

Q. That is right, is it not?

A. The only ones that could make them all under one contract.

Q. The only ones that could manufacture them, were they not?

A. No, sir.

Q. Do you mean to say that the Republic Iron & Steel Company could make all sizes of hoops?

A. They could make hoops; not all sizes, but they can make hoops.

Q. But the Carnegie can make all sizes of hoops?

A. They can make all sizes if they feel disposed to do it.

Q. They could do it?

A. They could do it.

MR. LINDABURY: Is not this point reasonably clear, Judge?

MR. DICKINSON: It seems to be, on my side.

THE WITNESS: It seems clear. I am trying to make it clear enough to you.

By Mr. Dickinson:

Q. I will put it to you in this way——

A. I will admit they can make it all.

Q. The Carnegie?

A. They can make it all.

Q. And that is the only one that could?

A. Under one contract; I will admit it.

Q. I do not want you to admit anything. I am not trying to drive you to any admission. I just want the facts.

A. I am trying to tell you what is the truth. That is the reason I am trying to understand you exactly.

Q. And that is true, is it not?

A. Yes; that is true.

Q. Did you ever make a contract with the Carnegie Company by which they furnished all of these things you have mentioned?

A. On all of our contracts all of those things are mentioned. We can take them; we can take either one of them, but we do not have to take them. We can take out all in one size if we want to; we can take all in bars, all in hoops, all in bands; we can take it all on any individual item on that contract.

Q. I understand, but if you had a contract which gave you the privilege of taking all of those, and you did have some contracts of that kind, did you not?

A. Yes, I am saying that the contracts give us that privilege.

Q. Carnegie was the only one that could furnish all, was it not?

A. No, I did not mean that.

Q. Wasn't that the only one that could furnish all sizes of hoops?

A. But you haven't asked me how many I bought from. If I have a contract from Carnegie, it does not say that I have to buy hoops from Carnegie. In fact I did not.

Q. You did not?

A. No, sir; because I place the order where I think each mill makes the best of its particular product. For instance, I

consider that a certain mill makes the best hoops, and they get my hoop orders.

Q. What mill did make the best hoops?

A. I prefer not to say.

Q. Well, there was one?

A. There was one.

Q. They got your hoop orders?

A. They get my hoop orders. They get my hoop orders where I can wait for delivery.

Q. When you could wait for their delivery they got your hoop orders, because you wanted that hoop?

A. Because theirs was the best hoop.

Q. Theirs was the best hoop and you wanted it?

A. I did.

Q. And when you could get delivery you gave it to them?

A. Yes.

Q. You gave them a preference on that account?

A. Yes.

Q. Without calling for the name of that particular concern, because I do not want to unduly develop your business, when you wanted that particular kind of hoop did you take any bids from others?

A. Certainly I did, and orders from others.

Q. I know, but when you wanted that particular kind and the delivery was suitable to you, did you take any bids on that kind of hoop from others?

A. I did.

Q. Although you had made up your mind to purchase from this concern?

A. At equal prices or better.

Q. Do you remember in the year 1907 what was the tonnage on hoops that you bought?

A. I just gave it all to you at 1,200.

Q. Getting out of hoops, this particular thing that you have such a predilection for, how much have you bought——

A. (Interposing) I could not separate that, because they are all in one contract; I could not separate them.

Q. The contract for hoops, even though it involved the

special and particular kind of hoop that you wanted, was generally in a contract for these other things?

A. No. I said I preferred a certain mill's hoops. When you say, was that lumped in the Carnegie contract, I do not know.

Q. I did not mention Carnegie; I just wanted to know.

A. You said in that contract, and that is the contract I refer to.

Q. I want to know if you made a separate contract for those particular hoops?

A. The particular mill that made this particular hoop also made bands, and some sizes of light bars, and they got some of that business, and they also made galvanized material which we handled, that is, galvanized hoops and bands. Their contracts covered that also.

Q. And the contract with this concern involved galvanized material?

A. Which concern?

Q. The concern that made these particular hoops, that you did not want to mention?

A. Their contract did not cover——

Q. (Interposing) I forebore to ask you because I did not want to unduly force you on that.

A. Their contract covers extra for galvanized.

Q. Did Carnegie make galvanized?

A. They do not do any galvanizing to my knowledge themselves, but they quote on galvanized material.

Q. They quote on galvanized material?

A. Yes, sir.

Q. Take the year 1907, did you buy any of those particular kinds of hoops from that particular concern that made them, that were so desirable to you that when you could get delivery of that hoop you would get it?

A. And if you were in our business you would know how desirable it was. Yes, we bought in 1907.

Q. From that concern?

A. Yes.

Q. In the contract providing for the purchase of these hoops what other materials or products were included?

A. Well, the contract itself specified bands besides the hoops.

Q. How about the galvanized stuff?

A. Listen; I am telling you. It specifies bands, and then they attach their galvanized extras for all sizes on hoops and bands. Now, if we want galvanized we simply order the material black, and when it is ready to roll, if we want it galvanized we order it galvanized, and we put that extra over the contract price. Those extras may change from the contract on the galvanized.

Q. And that varied at different times?

A They go up and down according to the spelter market.

Q. So you awarded a contract, as a rule, where it was so subject to variations?

A. All galvanized extras would be subject to the cost of spelter.

Q. And did you take any bids on these galvanized extras under the price that was fixed?

A. We got prices from all the galvanizers, in the Pittsburgh district, and even here. In that particular instance we got them in Pittsburgh particularly, but here to correspond with those prices.

Q. In 1908 how much did you buy of the Carnegie, of bands and small shapes and hoops?

A. I lumped it all together for the whole ten years.

Q. I am asking you one year.

A. I could not tell you. I suppose it would run about the same.

Q. Can you give it for any one year?

A. Yes, I have it here; about 33 1/3 per cent. It is about one-third of our purchases.

Q. From the Carnegie?

A. That was bars; bars, bands and hoops and small shapes from Carnegie.

Q. About 33 1/3 per cent. of that you think for each of the years?

A. I think that would cover it, yes.

Q. From the time you dealt in this down to the present time?

A. I think so, yes.

Q. You said something about if you had a contract, say with the Republic, and that contract ran out, that you might have to pay more than other companies were charging. What did you mean by that?

A. I meant by that, suppose the Republic were after business, they hadn't many orders on the books and were after business. They would come and probably give me a contract for six months or possibly less than six months.

Now, the other companies being busy, would only take a three months' contract. Don't you see those contracts would lap one another?

Q. The Republic would run over the others?

A. The Republic would run over the others. That contract placed with the Republic might be at a lower price than that they would give me for a new contract at the time I wanted to place one with the Carnegie. Is that clear?

Q. That is what you meant by that?

A. Yes.

(Whereupon, an adjournment was taken until Monday, October 27, 1913, at 10:30 o'clock a. m.)

TRANSCRIPT OF RECORD.

SUPREME COURT OF THE UNITED STATES.

OCTOBER TERM, [redacted] 1917 1919

No. [redacted] 16[redacted]6

THE UNITED STATES OF AMERICA, APPELLANT,

vs.

UNITED STATES STEEL CORPORATION ET AL.

APPEAL FROM THE DISTRICT COURT OF THE UNITED STATES FOR THE DISTRICT OF NEW JERSEY.

VOLUME 19.

DEFENDANTS' TESTIMONY.

FILED MAY 12, 1916.

ONE HUNDRED AND THIRD DAY.

EMPIRE BUILDING,
71 Broadway, New York City.

Monday, October 27, 1913.

Before Special Examiner JOHN ARTHUR BROWN.

Present on behalf of the United States, MR. DICKINSON and MR. COLTON.

Present on behalf of the defendants, MR. LINDABURY, MR. SEVERANCE, MR. BOLLING and MR. REED.

FRANZ A. ASSMANN

was called as a witness on behalf of the defendants, and being first duly sworn, testified as follows:

DIRECT EXAMINATION

By MR. SEVERANCE:

Q. Where do you reside?

A. East Orange, New Jersey.

Q. In what line of business are you actively engaged?

A. I am president of the Standard Tin Plate Company.

Q. Have either you or your family any interest in the Continental Can Company?

A. My family is a very large stockholder.

Q. Is your son an officer?

A. Yes, sir.

Q. What is his position?

A. He is vice-president and treasurer.

Q. How long has he been treasurer?

A. Since 1904.

Q. What year was that company organized?

A. 1904.

Q. Have your family been heavily interested in it ever since it was organized?

A. Yes, sir.

Q. What information have you had with reference to the business of the company?

A. Whenever they buy tin plate or pig tin in big supplies, they come to me for advice.

Q. How long have you been connected, in one way or another, with the tin plate business or with manufacturing any commodities from tin plate?

A. Since 1872.

Q. What was your business in 1872?

A. Tin can manufacturer.

Q. Where?

A. In New York.

Q. And what connection, if any, did you ever have with the American Can Company?

A. I was president of that concern from 1902 until 1904.

Q. Who was your predecessor as president of that company?

A. Edwin Norton.

Q. Has he any relation to the Continental Can Company?

A. His relation is the same as mine. His family and my family control that company.

Q. And have they controlled that company since it was organized?

A. Yes, sir.

Q. Who is the present president of the Continental Can Company?

A. Mr. Thomas G. Cranwell.

Q. What relation, if any, did Mr. Cranwell ever have to the American Can Company?

A. He was the vice-president until the time that I resigned as president, a few months afterwards, I think.

Q. What have been the relations between the American Can Company and the Continental Can Company, as to being competitors or otherwise?

A. They have been strong competitors, one against the other.

Q. Ever since the Continental was organized?

A. Yes.

MR. DICKINSON: He has not said that yet.

MR. SEVERANCE: I asked him that. He said yes. Do you mean the form of my question was leading?

MR. DICKINSON: Yes. You made the statement.

MR. SEVERANCE: I made it by way of a question. I will ask him in another question.

MR. DICKINSON: He has already answered it now.

By MR. SEVERANCE:

Q I ask you whether that condition of competition has existed since the organization of the Continental Can Company?

A. Yes.

Q. How long ago did you become connected with the Standard Tin Plate Company, of which you say you are president?

A. 1909.

Q. Have you been president of that company since 1909?

A. Yes, sir.

Q. Was that company in existence at that time, or was it organized in 1909?

A. It was in existence at that time.

Q. How long had it been in business?

A. Since 1904.

Q. What interest, if any, did you and your associates obtain in the Standard Tin Plate Company at the time you bought into it or went into it?

A. We bought the capital stock.

Q. All of it?

A. Yes; every share.

Q. Since you purchased the Standard Tin Plate Company has it enlarged its operations, or have they decreased?

A. When we bought it, it was a six mill plant. Next year we made it a ten mill plant, and it is a ten mill plant now.

Q. Where is it located?

A. Canonsburg, Pennsylvania.

Q. What supplies, speaking of the chief articles, do you have to buy for the manufacture of tin plate?

A. Pig tin and steel bars. Pardon me, I think the term is sheet bars; steel sheet bars.

Q. Do you buy those in the market?

A. Yes, sir.

Q. From what concerns, speaking generally, has the standard Tin Plate Company bought its supplies of sheet steel bars?

A. They have bought from the Lackawanna Steel Company; they have bought from the Carnegie Steel Company; they have bought from the Youngstown Sheet & Tube Company; they have bought from the Republic Iron & Steel Company; they have bought from La Belle Iron Works; they have bought from Follansbee. We might have bought from one or two others that I do not remember.

Q. What is your practice in making your purchases—to buy frequently in the open market, or do you make contracts for a yearly supply or substantially a yearly supply?

A. We usually make a contract at the end of the year for next year's bulk of the business, and the balance we get in the open market next year as we need it.

Q. In making your purchases under contract in what way do you proceed to secure market prices or prices for which you can contract?

A. Most of these people have offices in Pittsburgh, and we go to see them and ask them their prices, and ask them about delivery, and any other questions that enter into delivery and purchase of steel bars.

Q. Since 1909, when you became president of the Standard Tin Plate Company, have the prices quoted to you, where you were contracting for your yearly requirements, been uniform by the various mills, or have they been varying?

A. They have been varying.

Q. Upon what basis have you placed your contracts, competitive or otherwise?

A. Competitive.

Q. Did you at my request make up a percentage statement of your purchases from the different manufacturers?

A. Yes.

Q. Have you it with you?

A. Yes (producing paper).

(The paper produced was marked "Defendants' Exhibit No. 118.")

By Mr. Severance:

Q. I show you Defendants' Exhibit No. 118; is that the percentage statement of your purchases?

A. Yes.

Q. Is that a correct statement?

A. Yes, taken from our books.

Q. Have you personally checked it with your books?

A. Yes.

Q. And you know it is correct?

A. Yes.

Mr. Severance: I offer Defendants' Exhibit 118 in evidence.

Mr. Dickinson: That is excepted to, and any testimony based thereon is excepted to, on the ground that it is incompetent, that it is secondary evidence, and that it is a summary based upon original data which have not been produced and which data are the best evidence.

(The paper was thereupon marked "Defendants' Exhibit (Assmann) No. 118, October 27, 1913," and will be found in the volume of exhibits.)

By Mr. Severance:

Q. I call your attention to Exhibit No. 118, Mr. Assmann, and to the year 1909; it appears as follows: "Lackawanna, .62."

A. The point should not be there.

Q. The point should not be there?

A. That does not have anything to do with it. We bought 62 per cent.

Q. And that is the case in each instance where you find a point appearing before the figures?

A. Yes; if it is less than 10 per cent. there is one naught before it, and if it is less than one per cent. there are two naughts before it.

Q. From your knowledge of the purchases made, is it your recollection that those figures are substantially correct?

A. Not only my recollection, but I went through the books and verified every one of them by the books.

MR. DICKINSON: That is excepted to because the answer is not based upon his knowledge, but upon the books, and it is excepted to as incompetent and as being secondary evidence.

By MR. SEVERANCE:

Q. It appears from this exhibit that in 1909 you bought 62 per cent. of your requirements of steel—and by "you" I mean the Standard Tin Plate Company—from the Lackawanna Steel Company, and in 1910, 70.8 per cent.?

A. Yes.

Q. What steel company had the contracts for the bulk of your requirements in 1909 and 1910?

A. The Lackawanna Steel Company.

Q. Which company has had the contract for the bulk of your requirements since 1910?

A. The Carnegie Steel Company.

Q. And from this statement it appears that in 1911 the Carnegie Company had 93.7 per cent., and in 1912, 78.7 per cent., and in 1913, up to October 1st, 95.12 per cent.?

A. Yes.

Q. That was under the yearly contract that you have spoken of?

A. I would like to correct that, Mr. Severance. The 1912 and 1913 contract was made for two years.

Q. That was a two-year contract?

A. Yes.

Q. Those percentages are the amounts you actually received from the different companies?

A. Yes.

Q. Not the amount you contracted for; you contracted in tonnage?

A. Yes; received and paid for.

Q. What is done with the product of the Standard Tin Plate Company?

A. It is partly sold in the market in competition with other tin plate manufacturers, and partly manufactured for the Continental Can Company.

Q. That is, you sell the Continental Can Company a part

of your product, and sell the rest in the open market; is that right?

A. Yes. Now, I would like to avoid a misunderstanding. The Continental Can Company owns the stock of the Standard Tin Plate Company, all of it.

Q. It owns all of it?

A. Yes.

Q. And part of the product of the Standard Tin Plate Company, however, is sold in the market?

A. Yes, sir.

Q. How does it happen that you sold part of your product in the market?

A. We have always thought it was a dangerous proposition to depend on our own mill for our requirements or the bulk of our requirements, because in case of accident or strike or floods or so forth and so on, we might be hampered very much in getting our material which is used principally in two or three months, that is the Continental Can Company, in the canning season.

Q. When you say "We have felt that way," you mean the Continental Can Company?

A. Yes, sir.

Q. And for that reason has the Continental Can Company bought part of its requirements of tin plate outside the Standard Tin Plate Company?

A. A very large proportion.

Q. I will put the question again. You have already stated, Mr. Assmann, that the Continental Can Company is the owner of all the stock of the Standard?

A. Yes, sir.

Q. Now, in stating the reason for the sale of part of the Standard's product in the market where you have used the expression, "we have always thought it unwise to get our supplies from one source"—I do not remember the exact words—you were referring to the Continental Can Company?

A. Yes, sir.

Q. About what proportion of the supplies of tin plate required by the Continental Can Company has been bought

from companies outside of the Standard Tin Plate Company since the acquisition of the Standard Company in 1909?

A. From 50 to 66 2 3 per cent.

Q. About what proportion of the product of the Standard Tin Plate Company has been sold in the market to persons other than the Continental Can Company?

MR. DICKINSON: During the same period?

MR. SEVERANCE: During the same period since 1909.

THE WITNESS: From 50 to 60 per cent.

By MR. SEVERANCE:

Q. During that period from 1909 to the present time has the market in which the product of the Standard Tin Plate Company has been sold been a competitive market?

A. Yes, sir.

Q. Has the Standard Tin Plate Company, in selling its products, met the competition of other manufacturers?

A. It had to meet it.

Q. Has that competition extended to prices?

A. Yes, sir.

Q. What companies are the chief competitors of the Standard Tin Plate Company in the tin plate market?

A. Well, there is the American Sheet & Tin Plate, Phillips Sheet & Tin Plate Company, McKeesport Tin Plate Company, Jones & Laughlin; Washington Tin Plate Company; Carnahan Tin Plate Company; Follansbee Brothers; Osterling Tin Plate Company, and there might be one or two others that I do not remember just now.

Q. When the Continental Can Company has bought tin plate in the market to the extent of the percentage you testified to, in what manner did it proceed to make its purchases?

A. It saw the different manufacturers, especially McKeesport Sheet & Tin Plate Company, Phillips Sheet & Tin Plate Company, Pope Tin Plate Company, which is now part of the Phillips Sheet & Tin Plate Company, the American Sheet & Tin Plate Company, Jones & Laughlin and one or two others.

Q. Has the Continental Can Company made contracts for

this part of its supply or any part of that percentage, or has it bought from time to time in the market?

A. It principally made contracts and bought from time to time when they used more than the contracts called for.

Q. What situation was found by the Can Company in contracting, as to whether prices quoted by different manufacturers were uniform or varying during this entire period?

A. Hardly any one, as far as our business was concerned or the Continental business was concerned, where the two prices were alike.

Q. Has the Continental Can Company increased in the amount of its output since it was organized?

A. Very largely.

Q. Have you any figures with you that show the extent of that increase?

A. Yes, sir.

Q. Are you able on refreshing your recollection, to state what that increase is in round figures?

A. Yes, sir.

Q. Will you state it?

A. It was 175,900 boxes in 1905, base boxes. It has increased every year. In 1912 it was 1,290,000 base boxes.

Q. That is, the increase from 1905 to 1912 was from 175,000 to 1,290,000 boxes?

A. 175,900 base boxes in 1905 and 1,290,000 base boxes in 1912.

Q. Has each year intervening between those two years shown an increase or have some of them shown a decrease?

A. Always shown an increase every year.

Q. Mr. Assmann, there has been introduced in evidence in this case a contract by which a certain price was made to the American Can Company for its supply of tin plate by the American Sheet & Tin Plate Company. Was there any reduction of the ordinary current prices given to the American Can Company during the period that you were the president of that company?

A. Yes, sir.

Q. Do you remember about the per cent. of the discount from the average current market price?

A. Yes, sir.

MR. DICKINSON: This is objected to, the contract itself being the best evidence.

By MR. SEVERANCE:

Q. Was that by contract or was it by verbal arrangement?

A. Verbal arrangement.

MR. DICKINSON: The contract you refer to was a written contract, was it not?

MR. SEVERANCE: The contract you introduced in evidence was a written contract, certainly.

MR. DICKINSON: Yes.

MR. SEVERANCE: But I am asking about the arrangement existing when he was president.

MR. DICKINSON: Is that an entirely separate contract, or is that an arrangement referring to that same contract? I just want to understand the matter.

MR. SEVERANCE: What is the date of that contract?

MR. COLTON: 1905.

MR. SEVERANCE: That is what I thought.

MR. COLTON: From 1905 on to date, successive contracts; they have nothing to do with each other, have they?

MR. SEVERANCE: No. That is exactly as I understood it. Mr. Assmann went out of the American Can Company in 1904. That is correct, is it not, Mr. Assmann?

THE WITNESS: Yes, sir.

By MR. SEVERANCE:

Q. Up to 1904 you did not have a written contract such as has existed since 1905?

A. I do not know what contract exists now, of course, since I have been out; but I did not have any contract when I was President. It was a verbal agreement.

Q. You had, though, a lower price than the price quoted on smaller orders?

A. Yes, sir.

Q. About how much lower was that? Do you remember?

A. From 25 cents a box down to 15. Fifteen was the lowest and 25 cents was the highest.

Q. Was some such arangement as that in existence during the two years you were president of the company?

A. Yes. Not only during the two years, but from the very beginning. I was vice-president from the very beginning, and when Mr. Norton was president; that arrangement was made just as soon as the Can Company was formed.

Q. The Can Company was by far the largest customer, was it not, of the Sheet & Tin Plate Company?

A. Yes.

Q. You knew of those pending arrangements, the custom of giving that discount, at the time your family invested in the Continental Can Company, did you not?

A. Yes, sir.

Q. The Continental have had no such arrangement as that with the American Sheet & Tin Plate Company?

MR. DICKINSON: I object to that. The witness has not testified to that. He has not said that. You are putting words into his mouth.

MR. SEVERANCE: Strike out the question and the objection, then.

MR. DICKINSON: No; let the question stand with the objection.

MR. SEVERANCE: Very well.

By MR. SEVERANCE:

Q. Has the Continental Can Company had such an arrangement as that with the American Sheet & Tin Plate Company?

A. No, sir.

Q. Have its purchases been made in the manner you stated?

A. Yes, sir.

Q. Has that company been financially successful—the Continental Can Company?

A. Yes, sir.

MR. DICKINSON: I object to that, because that is a concrete conclusion of the witness, that it has been financially successful.

By Mr. Severance:

Q. You have stated that the business of that company has increased from 1905 to 1912 from 175,900 boxes to over 1,200,000 boxes?

A. Yes, sir.

Q. That is correct, is it?

A. Yes, sir.

Q. That is, its consumption has increased to that extent, I mean?

A. Yes, sir.

Q. Has it during that period done business at a profit or otherwise?

A. At a profit.

Mr. Dickinson: I object to that as irrelevant.

By Mr. Severance:

Q. Has the capital stock of that company been increased at any time?

A. Almost every year.

Q. What is the present capital stock of the Continental Can Company?

A. Five and a half million dollars preferred, and eight million dollars common.

Q. As compared with the American Can Company, what is its relative output, if you know?

A. Between 20 and 25 per cent.

Q. Is it larger or smaller than any other company outside of the American Can Company?

A. Larger.

Q. Where are the plants of the Continental Can Company located?

A. They have two factories in Chicago; two factories and a machine shop in Syracuse; one factory in New York; two factories in Baltimore; one can factory in Canonsburg, Pennsylvania.

Q. Is that where the plant of the Standard is located?

A. Yes, and a tin plate mill at Canonsburg.

Q. You mean the Standard tin plate mill is at Canonsburg?

A. Yes.

Q. Have those plants all been in existence since 1904?

A. No, sir.

Q. Which one did you satrt in with, if any?

A. We started in with one factory at Syracuse and one in Chicago.

Q. When were the others built? I want to know whether they were built immediately, all at once, or in different years.

A. In different years.

Q. Where is the market for the product of the Continental Company?

A. All over the United States.

Q. Mr. Assmann, how have the prices of pig tin run, if you know, since 1901? Have you prepared a statement from any sources as to the prices of pig tin since that time?

A. Yes, sir.

Q. From what sources?

A. From 1909, of course, from our own tin plate company. We purchase much pig tin also for the Continental Can Company.

MR. DICKINSON: Since 1909 from your own tin plate company?

THE WITNESS: From our own tin plate company. Since 1905 from the Continental Can Company. Since 1901 from the "American Metal Market."

By MR SEVERANCE:

Q. Have you been familiar with the range of business all this time?

A. Yes, sir.

Q. Are you able to state that these figures you have prepared are accurate figures?

A. Yes, sir; absolutely.

Q. Let me have that statement. It is hardly worth while to put it in as an exhibit. Suppose he reads it, Judge, subject to your objection, instead of putting it in as an exhibit.

MR. DICKINSON: I would like to look at it.

THE WITNESS: In explaining that I would say that these

are the average prices of the year. Pig tin fluctuates every day in the year, and these are the average prices for each year.

Q. Refreshing your recollection from this memorandum which you have made, I will ask you to state the average price of pig tin for the last twelve years and nine months, in this market.

MR. DICKINSON: We object to testimony based on that memorandum, and so much of it as is based upon the books of the two companies he has referred to, as being secondary and not primary evidence, and so much of it as is based on the quotations in "The Metal Market," that publication being itself the best evidence.

MR. SEVERANCE: I simply want to have it all together; that is all.

THE WITNESS: Shall I leave off the cents?

MR. SEVERANCE: No; give the exact quotations.

THE WITNESS: 1901, $26.46 per hundred pounds.

1902,	26.72	"	"	"
1903,	28.12	"	"	"
1904,	27.90	"	"	"
1905,	31.45	"	"	"
1906,	39.67	"	"	"
1907,	38.15	"	"	"
1908,	29.42	"	"	"
1909,	34.16	"	"	"
1910,	29.69	"	"	"
1911,	42.63	"	"	"
1912,	46.37	"	"	"
1913,	45.92	"	"	"

Those are the average prices for those years and nine months of 1913.

Q. Those figures from 1905 to the present time were made up by you from the books of the Continental Can Company and the Standard Tin Plate Company?

A. Yes.

Q. Mr. Assmann, have you made a memorandum of the average quotations of tin plate per box during this same period?

A. Yes.

Q. From what sources did you make that up?

A. Well, from the same source; that is, from 1905 until 1913, from the Continental Can Company.

Q. Those are the average prices that they received for the product?

A. Yes; the average price that they received.

Q. I think you misunderstood me; that is the average price that they paid, the Continental Can Company paid?

A. No, wait; I would not say that. That is the average market price of tin plate.

Q. The average market price?

A. Yes.

Q. From what source did you get those figures?

A. From the quotations we have had and from the Iron Age and Iron Trade Review.

MR. DICKINSON: I understood him to say that he got these from the books of those companies?

THE WITNESS: No, sir.

(A previous answer of the witness was repeated by the stenographer, as follows:)

"A. Well, from the same sources; that is, from 1905 until 1913, from the Continental Can Company."

THE WITNESS: I want to correct that.

By MR. SEVERANCE:

Q. Correct it. From what sources did you procure these figures that you put on this memorandum?

A. From the quoted prices, partly from the Continental Can Company, and partly as published in the Iron Age and Iron Trade Review, trade papers.

Q. And where did you get the prices that you put on this memorandum from 1901 down to that time?

A. From the same source.

Q. Not from the Continental Can Company's records?

A. From 1901 to 1905 from the papers I mentioned just now.

Q. Those were the average prices as quoted?

A. Yes.

Q. You have no knowledge as to the actual prices at which the tin plate was sold, as to the fluctuating prices at which it was sold?

A. They were not any higher; they were probably a dollar or two lower, when it comes to the actual purchases.

Q. You mean a dollar or two per ton?

A. Yes.

Q. This is sold by the box, is it not?

A. Yes.

Q. A box of 100 pounds?

A. Yes, from five to ten cents a box less.

Q. Kindly refresh your recollection from this memorandum and state these average prices per box f. o. b. Pittsburgh, from 1901.

MR. DICKINSON: Will you have him explain whether he is speaking of coke tin or tin plate?

THE WITNESS: Coke tin. 100 pound coke tin.

MR. DICKINSON: Is the market he is speaking of Pittsburgh?

THE WITNESS: Pittsburgh, f. o. b. Pittsburgh. I would like to say in regard to this that all prices are based on 100 pound coke plate, that is the basic price. If you buy 90 pounds or 80 pounds or 135 pounds it is all based on the 100 pound coke price.

MR. DICKINSON: I knew that, but I did not know whether you meant that in your answer and I just wanted to make it clear.

THE WITNESS: 1901, $4 per base box, 14 by 20, 100 pounds, f. o. b. Pittsburgh.

MR. DICKINSON: We object to the memorandum and to the testimony based upon the memorandum upon the ground it is secondary evidence, and that the publications themselves are the best evidence of the facts stated in them.

THE WITNESS: I leave out base boxes of 100 pounds because they are all alike.

	1902,	$3.55
March,	1903,	3.75
November,	1903,	3.55

January,	1904,	3.40
July,	1904,	3.25
November,	1904,	3.40
December,	1904,	3.50
October,	1905,	3.30
October,	1905,	3.40
November,	1905,	3.35
January,	1906,	3.45
April,	1906,	3.55
May,	1906,	3.70
October,	1906,	3.85
January,	1908,	3.65
March,	1909,	3.40
September,	1909,	3.50
November,	1909,	3.60
February,	1911,	3.70
August,	1911,	3.60
October,	1911,	3.40
July,	1912,	3.50
September,	1912,	3.60

And now it is $3.50.

By MR. SEVERANCE:

Q. You stated the capitalization of the Continental Can Company at the present time; what was its capitalization when it started in business in 1905; what was its capitalization then?

A. $500,000.

Q. So it has increased from $500,000 to $13,500,000?

A. Yes, sir.

MR. SEVERANCE: You may cross examine.

CROSS EXAMINATION

By MR. DICKINSON:

Q. That paper that you have just been reading from, when did you prepare it?

A. About two or three weeks ago.

Q. How long a time did you spend in preparing it?

A. I had it prepared, and I went to Pittsburgh last week

and spent three days to look over our books and see that it is correct.

Q. You had this paper prepared by others?

A. By my manager.

Q. Then you went to Pittsburgh and spent three days looking over the books?

A. Yes, sir.

Q. What books?

A. Our books at the Standard Tin Plate Company.

Q. Is that all you did towards verifying this paper?

A. Yes, sir.

Q. And that is all the work you did on it?

A. Yes, sir.

Q. The balance was done by others?

A. Yes, sir.

Q. And handed over to you?

A. The putting it down on the paper and handing over to me was done by others.

Q. Does that apply to this entire paper, the one giving the average price of pig ton, and also the one giving the prices of boxes of tin?

A. Yes, sir.

Q. And you made no other verification except such as was shown by your books—what books?

A. Of course, I had been in the business all of the time and I knew beforehand that they were correct, but I wanted to be sure about them that they were put down that way.

Q. You knew they were correct. Could you tell by looking at figures giving average prices for the year 1903 whether they were correct or not; could you?

A. Pretty well.

Q. How were these averages obtained, say for the year 1901; what was the basis of that average?

A. You will find in the Metal Market, published every year, every month, the price of pig tin, and then giving the average for the year, for the entire year.

Q. You said pig tin, didn't you?

A. Yes, I was giving it on pig tin.

Q. I will make it plain. Take the year 1901, the average price that year on the basis per box?

MR. SEVERANCE: You are not talking about pig tin? He understood you to be asking about pig tin.

MR. DICKINSON: I said "basis per box," and pig tin was not in boxes, was it?

MR. SEVERANCE: Certainly not; that is where he misunderstood you. He thought you were talking about one thing, and you were talking about another thing.

By MR. DICKINSON:

Q. I am talking about base boxes, 14 x 20 inches; take the average price for the year 1901, coke tin. On what was that based?

A. They are not average prices; they are positive prices. Pig tin is average price; coke tin are absolute prices.

Q. You mean to say that the average price was constant throughout the year 1901; it was always the same price?

A. On tin plate; yes, sir.

Q. On coke tin?

A. Yes, sir.

Q. That is to say, every day in that year it was the same price?

A. Yes, sir.

Q. There was no variation, then?

A. No, sir.

Q. Among all the manufacturers?

A. As far as I know.

Q. Now, take the year 1902.

A. If you will allow me to say a word there?

Q. Yes, I want you to put in all the words you want to.

A. The bulk of the business of the tin plate business is sold in the end of the year for next year, and contracts are made by all large can manufacturers and by all users of tin plate for the year following, and if you find a statement there that the whole year was one price, that means that the whole year's contract was based on that one price, and sold and delivered at that price.

Q. That is the price of all the manufacturers of coke tin for that year?

A. Yes, sir.

Q. Take the year 1902. I see you have a price here of $3.55 basis per box for coke tin. What does that mean?

A. That means during the year 1902 the price was $3.55.

Q. And that that was the price of all manufacturers for that year?

A. That I do not know. That is about the price. I stated before that that is the published price, and it may vary five or ten cents a box.

Q. You said for the year 1901 that the price stated here was the price of all the manufacturers for that year?

A. I did not mean to say that. That was the published price, and the manufacturers try to get as near that published price as they can. They have to make concessions of five and ten cents and perhaps fifteen cents a box to secure the business.

Q. Sometimes concessions were made for long-term contracts to very large dealers, such as the American Can Company, were they not, and there was such a concession as that made at the time you were president of it?

A. Yes, sir.

Q. And such concessions were made not only during the time you were president, but began before that? Now, at what time?

A. In 1901, when the American Can Company was organized.

Q. And from that time how long, as far as you know, did the American Can Company get that concession?

A. Until I resigned as president in 1904.

Q. You gave here for 1904, for July, 1904, the price for coke tin; is that price given here the same as the market price?

A. The same as the others. They are the published prices, and from that every dealer tries to get as nearly the published price as he can, and has to make concessions such as he may have to make, or care to make, in order to secure the business.

Q. What is that published price known as? Who publishes it?

A. The Iron Age, the Metal Market, the Iron Trade Review.

Q. Where does the Iron Age get it?

A. From the people that buy and sell; that is their business.

Q. The people that buy and sell, or the people that sell it?

A. The people who buy and sell.

Q. Buy and sell?

A. Yes, sir.

Q. And upon that, why, then, this published price that you have given here as the price for that year, is based?

A. Yes, sir.

Q. That was substantially the price except where by bartering sometimes there would be a concession made?

A. Yes, sir.

Q. And that would depend upon a particular dealing?

A. Particular dealing; the particular customer, upon what kind of tin plate they used. One man uses 100-pound tin plate, another man uses 135-pound tin plate. These prices are based on 100-pound tin plate, but sometimes there is more profit in a heavier weight tin plate than in the other, and, in consequence, one manufacturer will make a larger reduction than another manufacturer.

Q. Now, do you carry in your mind the prices of any particular year?

A. Well, there are so many changes there in the price of tin plate I would not say. I think I have got them in my mind for the last year or two.

Q. Take November, 1904. Do you know what the price was then?

A. No, I do not remember. I have not got it in my head.

Q. Could you remember for any of those years?

A. I know in 1901 it was $4.00. I know in 1900 it was $4.65.

Q. What was it in 1903?

A. I could not say.

Q. Could you say for any year back of 1906, except 1900 and 1901?

A. I think 1905 it was $3.40.

Q. Is there any other year that you can give?

A. Last year it was $3.40.

Q. I mean back in that period I am speaking of; back of 1907?

A. I do not think of any. Naturally, there are so many figures that I cannot carry them in my mind.

Q. Then what do you rely on to know if these figures are right? Do you rely on the quotations in the books from which they were taken?

A. Yes.

Q. It is upon that you base your testimony as to their being correct?

A. Yes; and that refreshes my recollection, when I look at it; it brings back to me that that was right, at such a time.

Q. Can you remember prices for particular months and particular years? Does it come back to your memory, or do you rely upon these papers?

A. I will not say it comes back to me as to any particular month. It usually comes back to me as to any particular year.

Q. You have given here months; you have given two months in 1905, and you have given two months in 1906.

A. Those I have taken from the papers that I quoted.

Q. And you relied upon the papers for their correctness?

A. On the trade papers.

Q. Then you do not pretend to remember those dates?

A. No, sir.

Q. Or to recall anything about them, do you?

A. No, sir.

Q. Were you with the American Can Company April 17, 1902?

A. Yes, sir.

Q. What position did you hold then?

A. Vice-President. I was elected President on April 22, 1902.

Q. Who were the directors of that company?

A. Oh, I do not know; I suppose the same directors that are the directors now.

Q. Who were the directors in that company then who were also directors at the same time in the United States Steel Corporation, if any?

A. I think it was only Mr. Graham—I would like to correct that; I do not know. I have never known who were directors in the Steel Corporation.

Q. What connection, if any, did Mr. Reid have with the American Can Company?

A. He was a director.

Q. And Mr. W. H. Moore?

A. He was a director.

Q. You do not know anything about their connection with the Steel Corporation?

A. I have heard it said that they were directors, but I could not tell you from my own knowledge. I have never been a director nor an officer in the United States Steel Corporation, and consequently I do not know what position they held there.

Q. You spoke of lower prices, at times from 15 to 25 cents per box, on coke tin. Lower than what? What did you contrast that with?

A. Lower than the prices that I quoted.

Q. That is to say, these quoted market prices as given in the newspapers?

A. Not in the newspapers; in the trade papers.

Q. In the trade papers?

A. Yes.

Q. What trade papers in that connection do you refer to?

A. To the American Metal Market, the Iron Age and the Iron Trade Review.

Q. You say that your company has factories and shops in various cities. When you first organized, where were your shops and factories located?

A. You mean the Continental Can Company?

Q. Yes, sir.

A. One in Syracuse and one in Chicago.

Q. Where did you get your next one?

A. In Baltimore.

Q. How did you get that?

A. We built it. We bought an old building and made a can factory out of it; we installed machinery and made a can factory out of it.

Q. Had that been used at all for manufacturing purposes?

A. I think it was an iron foundry before.

Q. But not in your line of business?

A. No, sir. None of those factories that we have bought were ever active factories. We did not buy out any can factories; we always created.

Q. So it is just a growth of your company, then?

A. Yes, sir.

Q. Not a consolidation or a combination with other companies?

A. No, sir; except that the Export & Domestic Can Company which was affiliated—that is, the same people owned the Export & Domestic Can Company that owned the Continental Can Company—they consolidated with the Continental Can Company in January of this year.

Q. Of this year?

A. Yes.

Q. What is your percentage now of the output, I mean the Continental's percentage, in the same products that it manufactures in common with the American Can Company, of which you said that you produced 25 per cent. of the amount produced by the whole country.

MR. SEVERANCE: He did not say of the whole country.

MR. DICKINSON: I mean 25 per cent. of that produced by the American Can Company. What is the amount of your output?

THE WITNESS: I said 20 to 25 per cent.

MR. DICKINSON: I have it here 25 per cent.

MR. SEVERANCE: He said 20 or 25 per cent.

THE WITNESS: Of course I have no absolute knowledge of what the American Can Company does. I have heard it stated that they used about 5,000,000 or 5,500,000 boxes of tin plate; and we used last year 1,290,000 boxes of tin plate, which would signify, taking tin plate as the basis, that we had about between 20 and 25 per cent. as much business as they had.

By Mr. Dickinson:

Q. Is tin plate the chief raw material used by both companies?

A. Yes, sir.

Q. You are speaking of the present time when you speak of that 25 per cent.?

A. I speak of 1912.

Q. Take back in the year that you began. What year was that?

A. 1905.

Q. What proportion did you produce of the amount produced then by the American Can Company?

A. We used 175,900 boxes, and, if my memory is right, when I was president of the American Can Company and resigned in 1904, we used between 3,000,000 and 3,500,000 boxes.

Q. That company used that much, you mean?

A. Yes. So that it was a very small percentage that the Continental used.

Q. What other makers at that time were there who manufactured in competition with the American Can Company in the United States?

A. Quite a number of them. Boyle & Company, in Baltimore; the Beacon Can Company—I suppose in every large city, almost, there is a can factory.

Q. Most of them are very small concerns?

A. Some of them are formidable.

Q. What large concern was there, or what was the next largest to the American Can Company?

A. I do not think there was any as large as the Continental. I am quite sure there is not now.

Q. You mean, then, you do not think that in 1905 any was as large as the Continental was at that time?

A. They started in 1905.

Q. I understand.

A. And at the end of 1905 I do not think there were any of them as large as the Continental was then.

Q. You have given here these boxes as 14 x 20, 100 pound boxes?

A. 100 pound boxes.

Q. Are they always 100 pound boxes for those dimensions?

A. No. I think I mentioned before that the base is 100 pounds. A good deal of tin that is used is 100 pounds, but some people use 80 pounds, some people use 85 pounds, some people use 90 pounds, some people use 112 pounds, and some use 135 pounds, but the base price is 100 pounds. When you buy tin plate you make your contract price on 100 pound boxes, and you have to pay more as the weight increases, and less as the weight decreases, but the basic price is 100 pounds.

Q. Were all the market prices, basic prices, quoted on 100 pounds? Were not some quoted on 108 pounds?

A. If you want a quotation on 108 pounds——

Q. (Interposing) No, not what I want, but what was quoted in the trade papers.

A. I think the English papers quote 108 pounds, but I think the American quote only 100 pounds. They may quote 108, but I doubt it.

Q. The dimensions are 14 x 20, are they? They are the same?

A. They are the same, 280 square inches, and 112 sheet is the base box of tin plate. That is a 100 pound box of tin plate. Now, you can buy any size of tin plate that you want to, up to 30 inches.

Q. And it is on that that you say these base prices are given?

A. Yes; 14 x 20, 100 pounds. If you buy 28 x 40, you pay double the price that you pay for 14 x 20.

Q. Those dimensions 14 x 20, do they always indicate 100 pounds quoted, or may they be 14 x 20 and weigh more than 100 pounds?

A. Yes.

Q. They may weigh the same?

A. Yes.

Q. So that is not uniform weight for that price?

A. That is the basic price.

Q. That is so far as the price is concerned, but I mean actually, as a matter of fact, it is possible there would be a different weight for those dimensions?

A. Yes.

Q. Would there be a less number of plates in the box, so that the box would only weigh 100 pounds, or do you mean that it will weigh more, the box will weigh more or less?

A. For instance, 100 pounds, 14 x 20, is the base, and you can buy any weight you want to, 80 pounds or any weight you want.

Q. You spoke of the prices since 1909. What have you had to do personally with sales and purchases of coke plate since 1909?

A. Why, my man comes to me and tells me what other people sell at, and I tell him what price to make and what price not to make.

Q. Have you actually superintended the selling?

A. To a great extent.

Q. To what extent have you superintended the buying, if at all?

A. All the sheet bars, and to a great extent the pig tin. The man reports to me "I can buy pig tin at such a price." Well, we buy it, and I go usually with him when we make our contracts, to Pittsburgh, and we shop around and see what we can do.

Q. The United States Steel Corporation does not make any pig tin, does it?

A. No, sir.

Q. And in speaking of purchases, you have not spoken of purchasing any pig tin made by them?

A. I thought you asked me the question what I had to do with the buying and selling.

MR. SEVERANCE: If we made it, the price would not have doubled.

By MR. DICKINSON:

Q. Since 1909 down to what time have you purchased from the mills, sheet?

A. Until now.

MR. SEVERANCE: By that last question, where you said "sheet," you mean sheet bars?

THE WITNESS: I referred to sheet bars; we do not buy sheets. We use sheet bars.

By Mr. Dickinson:

Q. From which you make what?

A. Sheet and tin plate.

Mr. Severance: The form of the question was the purchasing of sheet; that is the reason I made the suggestion.

By Mr. Dickinson:

Q. You have been buying for how long yourself?

A. Well, since 1909. That is, where your say "yourself," I am doing it.

Q. I mean where you have come in personal contact and have personal knowledge of it.

A. Yes.

Q. So that in respect to bars, your testimony does not go back of 1909, as I understand you?

A. Not as far as sheet bars are concerned.

Q. Now, take the year 1909. From whom do you now recall that you made purchases that you yourself superintended and had personal knowledge of, in that article?

A. Well, I bought from the Lackawanna Steel Company. I went and saw the president of the Lackawanna Steel Company myself at that time.

Q. Did you make all your purchases that year from the Lackawanna Company?

A. No, sir.

Q. What percentage of them?

A. A good percentage.

Q. What percentage?

A. I think 60 to 65 per cent. You are speaking only of 1909?

Q. 1909.

A. I beg your pardon. I thought you meant—well, I guess that is right; in 1909, 60 to 65 per cent.

Mr. Severance: 62, according to this memorandum.

The Witness: There you are.

By Mr. Dickinson:

Q. The figures you have given as to steel purchases from 1909 to 1911 were based upon this memorandum that you have, were they not?

A. Not entirely.

Q. Let us see how much. When was this prepared, this memorandum?

A. About two or three weeks ago.

Q. Who prepared it?

A. Mr. Follett, my commercial man at the mill.

Q. Where is the mill?

A. Canonsburg, Pennsylvania.

Q. Did you direct him to prepare it?

A. Yes.

Q. And he sent it to you?

A. Yes.

Q. And it was in this form when he sent it, like you have presented it here?

A. Yes.

Q. From what source did he get it?

A. From our own books.

Q. And you accepted this as correct?

A. No, sir.

Q. What did you do about it?

A. I went last week to Pittsburgh and spent three days in Pittsburgh and went over every item, according to our own books, to see that it was correct.

Q. From what books did he prepare it? Where are the books?

A. In our mill.

Q. Where?

A. In the office.

Q. Whereabouts in the office?

A. In the safe, I suppose.

Q. I mean in what city or town?

A. In Canonsburg. Our office is in the mill, and the mill is in Canonsburg, and that is where the books are kept.

Q. About how far is that from Pittsburgh?

A. About 20 miles.

Q. When you say you went to Pittsburgh, did you go to Pittsburgh or Canonsburg?

A. I went first to Pittsburgh and afterwards to Canonsburg.

Q. Where did you compare this paper?

A. In Canonsburg.

Q. You said Pittsburgh.

A. Oh, but it is usual to say Pittsburgh.

Q. And you say you verified it one place and then you say another. I want to get an understanding.

A. Then I beg your pardon.

Q. Did these books show the prices at which these contracts were let?

A. Yes.

Q. What else did they show in respect to prices?

A. They showed what kind of steel it was, whether it was Bessemer or open hearth steel.

Q. It showed from whom you purchased, and the kind of steel?

A. And at what price.

Q. And the price?

A. Yes.

Q. It didn't show anything else as to prices, did it?

A. That is what it showed.

Q. I say it did not show anything else as to prices except what you stated. If it did, state what it did show.

A. That is all.

Q. It did not show any prices of anybody except those to whom you awarded the contract?

A. No, sir.

Q. I see from this paper that in 1911 you purchased from the Carnegie Steel Company something over 93 per cent., didn't you?

A. Yes, sir.

Q. At what time in that year was that contract made?

A. It was made in November or December, 1910.

Q. How long did it run?

A. One year.

Q. And that covered 93 per cent. of your requirements?

A. It turned out to cover 93 per cent. We buy a certain tonnage. We buy either 30,000 tons or 35,000 tons as the case

may be, and the balance of them we buy in the market as we need it.

Q. You made an estimate, did you not, of the probable requirements?

A. Yes. We usually buy a little less than what our maximum output might be.

Q. It turned out you got a little less, but you really bought about 93 per cent. of your requirements for that year?

A. Yes, sir.

Q. What price did you pay the Carnegie Company?

A. The price is based on the trade papers and regulated every three months.

Q. What do you mean by "based on the trade papers and regulated every three months"?

A. On the Iron Trade Review, on the Iron Age, whatever the quotations are. On the first of April, for instance, that would be the price for April, May and June; the first of July it would be the price for July, August and September, and from that price we make a dicker; we get a dollar or two dollars or three dollars off it, and that is about the way everybody quotes.

Q. So it is made in reference to the trade paper quotations?

A. Yes, sir.

Q. And you say that is about the way everybody quoted?

A. Yes, sir.

Q. What do you mean, all the manufacturers quoted?

A. All the manufacturers use the papers and get as near the price quoted in the trade papers as they can.

Q. That is the standard on which they work?

A. That is about the standard. That is the only information which we can have. In fact it is the only information which we have got how other people do business, what their prices are.

Q. But that was made the basis of this contract, was it?

A. Yes, sir.

Q. And the price changed as these prices in the trade papers changed?

A. Yes, sir.

Q. And there was a certain deduction from that according to the particular trades you made at that particular time?

A. Yes.

Q. And these prices, generally quoted prices by the manufacturers, are the prices that prevail except in some particular instance like this, where you dicker and barter and get a concession from them? Is that right?

MR. SEVERANCE: He did not say that.

THE WITNESS: We alone do not dicker; everybody makes the best terms he can. It is not only ourselves, but it is everybody.

Q. Do you know what other people do; are you speaking for other people?

A. I know what some of the other people do.

Q. Do you know the particular prices that other people get?

A. No, sir.

Q. Then you do not know how far they get concessions in these market prices, do you?

A. No, sir; not how much they get; I know they get it.

Q. You know they get it, do you?

A. They tell me so.

Q. All of them do not tell you what they do?

A. Well, I do not suppose I have seen every one, but I see most of them.

Q. Aren't there a good many people in the business that do not tell their private affairs, and do not tell what they get?

A. There are not a great many people in the business; there are only about eight or nine or ten tin plate manufacturers, and this only holds good to sheet bars.

Q. Do you go out and tell what concessions you get from the Carnegie Steel Company to your competitors?

A. To some people I do.

Q. Do you tell all your competitors?

A. No, I do not see them all.

Q. Then some did not know what concessions you got?

A. That is right.

Q. And some of them may have got concessions that you did not know about?

A. Yes.

Q. And some may have obtained market prices and you would not know anything about it?

A. Maybe.

Q. You do not undertake to say what prices other people pay, do you?

A. No, sir; but I say what is the general rule of the business.

Q. Take the year 1912; that year you got something over 78 per cent., this paper states, from the Carnegie Company?

A. Yes, sir.

Q. And when did you make that contract?

A. Either November or December, 1911.

Q. And how long did that run?

A. Two years.

Q. And did you get a concession then from the published prices?

A. Yes, sir.

Q. How much concession?

A. The concession varies as to the original prices. If it is $20 it may be only 50 cents. If it is $25 it may be $1.50. If it is $30 it may be $2. Those exact figures I have not got in my head now.

Q. Those exact figures you do not keep in your head?

A. If the published price of steel bars, we will say, is $20, we may get off that half a dollar. If it is $24 or $25, the published price, we may get off $1 or $1.50. I do not know the exact figures. If it is $30, we may get off $2.

Q. Published prices are the basis for discount?

A. Yes.

Q. In all cases?

A. Yes, sir.

Q. And when the price would be larger, sometimes your discount would be larger than when the prices would be lower?

A. Yes, sir.

Q. And you cannot recall just what it would be at these particular times?

A. No, sir.

Q. But it varied within the figures you give?

A. It varies from 50 cents to $2.

Q. Per ton is that?

A. Per ton.

Q. Now, for the year 1913, it was something over 95 per cent.?

A. Yes, sir.

Q. For the Carnegie Steel Company?

A. Yes, sir.

Q When was that contract made?

A. That other contract ran for two years, I believe I told you.

MR. SEVERANCE: It is still in existence. It is not completed yet.

By MR. DICKINSON:

Q. What you said about concessions applies to the year 1913 as well as the year 1912?

A. Yes, sir.

Q. You are one of the largest purchasers in your line, are you not, in the United States?

A. Of steel bars?

Q. Yes.

A. No, sir.

Q. I mean for manufacturing for the purpose for which you use them?

A. No, sir; we have only a ten mill plant. We use about 40,000 tons of sheet bars a year. The McKeesport Tin Plate Company has 22 mills. They will use twice as much as we. The Phillips Sheet & Tin Plate Company have 44 mills. They will use four times as much as we do.

Q. Where you speak of bars in that connection you mean sheet and tin plate bars?

A. Sheet and tin plate bars, yes. That is the term.

Q. When you say steel bars you mean sheet and tin plate bars?

A. Always sheet and tin plate bars.

Q. These figures in your memorandum here so far as the Carnegie Company is concerned, are based upon the contracts with that company.

A. Yes, sir.

Q. Now, we will ask you to produce the contract with that company for the year 1911 and the year 1912 and the year 1913, and bring them up this afternoon when we resume.

A. I do not know as I can do that. I think the originals are in Canonsburg.

Q. Then send and get them, and you can sumbit them for our inspection.

A. Yes, sir.

Q. You can get them by tomorrow or next day?

A. I will write this afternoon. He gets the letter tomorrow.

Q. You can telegraph for them.

A. Yes, I can telegraph for them.

Q. Suppose you do that.

A. Yes, sir. I think I can get them for you.

Q. Now, I understand that the Standard Company is owned by the Continental Company?

A. Yes, sir; they own all the stock.

Q. And that the Standard Company does not sell all its output to the Continental Company?

A. No, sir.

Q. But sells part of it on the market?

A. Yes, sir.

Q. Does it do that every year?

A. Yes, sir.

Q. How near could the Standard supply the Continental, or how much in excess?

A. The Standard can make about 750,000 boxes now, and the Continental used last year 1,290,000 boxes.

Q. So, notwithstanding the Standard does not make as much as you use, a portion of what the Standard makes is sold on the market, and at the same time you go out into the market and purchase the very kind of article that the Standard sells? Is that true?

A. Yes, sir.

Q. Take last year: How much did you use of what the Standard made, and how much did the Standard sell outside?

A. I think the Continental used between 50 and 60 per cent.

Q. Of what they made?

A. Yes, sir.

Q. And about 50 per cent., or 40 per cent., as the case might be, was sold on the outside?

A. Yes, sir.

Q. What prices did you get for what the Standard sold on the outside as compared with what you paid on the outside for what you got?

A. Pretty nearly the same price.

Q. And although you were paying pretty nearly the same, and there was no financial advantage, practically, one way or the other, instead of using your own product you sold some of it in the market?

A. Yes, sir. I gave the reason for that in direct examination, as to why we did that.

Q. I would like to have you give it again, because I thought there was a little confusion about that.

A. The reason we do that is this: Of course, the Continental is larger now than it used to be. You take it in 1909 or 1910, when the Continental Can Company used just a little more than the Standard would make, it would be dangerous for the Continental Can Company to depend entirely on the Standard Tin Plate Company's output, because if the Standard Tin Plate Company should have any accidents, any strikes or any flood—as we really did have a flood—they would be out of tin plate, and it would be impossible, in the months of June, July and August, when the canning season is at its height, to buy the tin plate, because most tin plate has to be made to order, as far as sizes are concerned, and for that reason we have never, and probably never will, depend entirely on the Standard Tin Plate Company's output.

Q. You cannot depend entirely on it when they only make 750,000 and you use over a million, can you?

A. It would not be a very hard proposition to increase the output of the mill. We could increase the output of the mill sufficiently so that we could depend on it entirely. There was a time, during these years since 1909, when we bought the mill, that we made more tin plate than we used.

Q. Could you not always go into the market and buy what you needed over and above what the Standard could produce for you?

A. We could not at the time we needed it.

Q. What do you mean by "at the time we needed it"?

A. It will take any mill from six to eight weeks to make the tin plate that the Continental Can Company uses, because it is all odd sizes. You give them specifications to-day, and it is usually 50 or 60 days before you can get the stuff. When the corn and tomatoes are ripe—and the Continental Can Company's largest output is in fruit and vegetable cans—you cannot wait 60 days to get your tin; you have to get your order in before. So it is dangerous for any company to depend entirely on its own production in tin plate, because there may be, and there usually are, some accidents—we had the flood, for instance, last year, and it knocked us out for two or three weeks, and we could not make a box of tin plate.

Q. Was this excess sold because you had made previous contracts for a portion, and that you could not use, after having made those contracts, all of the output of the Standard?

A. When we made our contracts, or when the Continental makes its contract for tin plate with outsiders, we come together and figure out how much we want to depend upon our own mill for and how much we want to sell; and that proportion that we have decided to sell in the market we sell in competition with all the other tin plate makers, either by way of yearly contract or by an outright sale, whatever the case may be.

Q. Did you sell generally by yearly contract?

A. Yes; I think the bulk of the business is done by yearly contracts.

Q. State, then, for the year 1912, to whom the Standard sold on yearly contracts.

A. We sold to McVoy in Chicago.

Q. Give us his initials, please.

A. I cannot remember the initials.

Q. Very well. Proceed.

A. We are selling this year to Fairbanks.

Q. You sold all to McVoy?

A. No, sir.

Q. Deal with one year. We are talking about 1912, by contract, now.

A. I would have to look that up, Judge. I have not all those people in my mind.

Q. That is the only one you can name to whom you sold by contract in 1912?

A. Meurer Brothers in Brooklyn, by contract.

Q. Can you name any others for 1912?

A. We sold to Gummy, McFarland & Company in Philadelphia.

Q. Can you name any others?

A. If I do not take up too much of your time to think.

Q. Do not worry about that.

A. I think we sold to the Sexton Can Company in Boston.

Q. You are speaking of 1912, by contract?

A. Yes, sir. And there are a lot of others that I do not know. At least there are others that do not come to my mind.

Q. Take the year 1913.

A. We have a contract with Meurer Brothers.

Q. What percentage of your output have you given them in 1913?

A. I think we have contracted with them for 10,000 boxes. We have contracted with the Fairbanks people in Chicago for from 50,000 to 75,000 boxes. We have contracted with McVoy in Chicago for 50,000 boxes. I do not know the figures with the other people, but they are about in the same line.

Q. Do you know anything about the Louis Follett Tin Plate Company?

A. Louis Follett is my commercial man. He is the man I am speaking about.

Q. Was he with the Standard Tin Plate Company?

A. He is with the Standard Tin Plate Company.

Q. What are his duties as your commercial man?

A. He sells tin plate, he runs the office, he gets quotations on steel bars, together with me, and pig tin, and has general supervision of our office force.

Q. Do you know Mr. J. A. Campbell of Youngstown, Ohio?

A. No, I do not know. I may have met him.

Q. Did you ever attend any of the meetings of the committees that were appointed in pursuance of the Gary dinners, over which Mr. Campbell presided?

A. No, sir.

Q. Your Mr. Follett did, did he not?

A. I do not think so. I am sure he did not.

Q. You were not there yourself?

A. Well, he would tell me if he had.

Q. He did not tell you? That is all you mean, is it not?

A. All right; put it that way.

Q. That is what you mean when you say you are sure?

A. Yes.

MR. DICKINSON: That is all.

MR. SEVERANCE: I have no further questions.

MR. DICKINSON: I offer in evidence memorandum of agreement made and entered into the 10th day of October, 1910, between the Carnegie Steel Company and the Standard Tin Plate Company, produced by the witness Assmann in response to the request of the Government.

Also memorandum of agreement of October 31, 1911, made between the Carnegie Steel Company and the Standard Tin Plate Company, together with contract of September 30, 1912, between the Carnegie Steel Company and the Standard Tin Plate Company, referring to said agreement of October 31, 1911.

It is agreed that the original contracts here produced, when copied and compared, shall be returned to Mr. Assmann, and that the copies shall be used with the same force and effect as the originals.

(The documents above referred to were thereupon marked "Government Exhibit (Assmann) No. 441, October 27, 1913," and "Government Exhibit (Assmann) No. 442, October 27, 1913," and will be found in the volume of Government Exhibits.)

HUGH W. LOGAN

was called as a witness on behalf of the defendants, and being first duly sworn, testified as follows:

DIRECT EXAMINATION

By Mr. Severance:

Q. Where do you live?

A. West Hoboken, New Jersey.

Q. What is your business?

A. You mean what company?

Q. Yes, what company?

A. F. L. Smidth.

Q. What is the business of F. L. Smidth & Company?

A. Engineers and manufacturers.

Q. What branch of engineering do they practice?

A. Exclusively designing and building works for making Portland cement.

Q. Where is the home office of that company?

A. 50 Church Street, New York City.

Q. Have you any foreign office, too?

A. Yes.

Q. Where is that?

A. Copenhagen, Denmark; that was the parent company.

Q. How long has that New York company been in business?

A. Eighteen years.

Q. You say their exclusive business is designing and building cement plants?

A. Yes; that is, in the engineering line.

Q. Do they furnish the machinery?

A. Not all of it; most of it.

Q. Do you have anything to do with placing the orders for steel in connection with the building of cement plants?

A. No, sir.

Q. Have you had to do with receiving the bids and assisting in placing the orders?

A. Yes.

Q. What kind of steel, if any, is used in building cement plants?

A. Structural and fabricated steel.

Q. In addition to fabricated and structural steel, have you had any experience in the purchasing of steel bars?

A. Yes.

Q. What do you use them for?

MR. DICKINSON: Are you speaking of him personally or his company?

MR. SEVERANCE: Your company, Smidth & Company.

THE WITNESS: We use those steel bars for manufacturing a patented grinding article for grinding pebble.

By MR. SEVERANCE:

Q. That is used in the plants?

A. In the pulverizing machine.

Q. When did you begin purchasing that?

A. The latter part of 1909.

Q. And from whom have you made your purchases of those bars since that time, during the last four years?

A. From the Buffalo Steel Company and the Faitoute Iron & Steel Company.

Q. Where are they located?

A. Newark.

Q. Have you bought from any other company?

A. The Franklin Steel Company.

Q. Where are they located?

A. Franklin, Pennsylvania; and the Carnegie Steel Company, and Jones & Laughlin, I believe; Ryerson. Ryerson is a merchant, and maybe one or two others.

Q. About what proportion of your purchases have you made from Carnegie?

A. Less than 10 per cent., I believe.

Q. Upon what basis have you made your purchases; is it competitive or otherwise?

A. Competitive.

Q. Have the prices quoted to you by different manufacturers been uniform or varying?

A. Varying.

Q. Have you placed your orders after securing quotations?

A. Yes.

Q. Outside of these purchases of bars, you say you purchase structural material?

A. Yes.

Q. In connection with the building of what cement plants, have you had to do with receiving bids and placing orders for structural?

A. The Glens Falls Cement Company, Glens Falls, New York.

Q. Do you remember who got the contract in that case?

A. I have a memorandum, if I can use it.

Q. You may use your memorandum to refresh your recollection. It is a memorandum you made yourself?

A. Yes.

Q. You are able to testify from your recollection, using that memorandum?

A. Yes.

MR. DICKINSON: I object to his using the memorandum; he has not shown how it was made or when it was made, or the sources from which it was made. I object to it as secondary and incompetent, and also because the question is leading.

By MR. SEVERANCE:

Q. When did you make this memorandum?

A. Last week.

Q. From what sources did you make it?

A. Consultation with our engineering department.

Q. Were you familiar with this work when it was done?

A. I had some knowledge of it, but I would not say that I was a party to the letting of any of the contracts.

Q. Did you know at the time from whom the steel was being procured?

A. Yes.

Q. And are you able by this memorandum that you have made to state that you know that the parties that you testified to were the actual parties who furnished this steel?

A. Yes, sir.

Q. During what years, Mr. Logan, did you have to do with placing—did your company have to do with placing the orders for structural steel in connection with these various plants?

A. 1905 and 1907.

Q. Various years since that time?

A. Yes, sir.

MR. DICKINSON: Let me see. I don't understand exactly.

MR. SEVERANCE: He says 1905 and 1907 and various years since.

MR. DICKINSON: Suppose you let him state what years, if he knows.

By MR. SEVERANCE:

Q. Do not use this memorandum at all—counsel seems to think you ought not to use it—just give us your best recollection, Mr. Logan, as to what concerns you bought structural from, and the names of the plants in which that structural was used, and as best you can, the years when it was used.

MR. DICKINSON: You mean fabricated or unfabricated or, both?

MR. SEVERANCE: Both.

THE WITNESS: Structural steel?

By MR. SEVERANCE:

Q. Yes.

A. In 1905, the Glens Falls Portland Cement Company.

Q. Do you remember from whom you bought that?

A. I believe it was Milliken Brothers; for 1907 the Alsen's.

Q. How is that spelled?

A. A-l-s-e-n, with an apostrophe -s.

By MR. DICKINSON:

Q. You mean you bought from them?

A. No, this was another contract; the Alsen's American Portland Cement Company at Alsen, in New York, in 1907.

By MR. SEVERANCE:

Q. Who did you buy your structural steel from?

A. I am not sure but that it was the Berlin Construction Company, I am not so sure of it. 1909 it was the plant of the Canadian Portland Cement Company at Colborne, Ontario.

Q. Who did you buy your structural from for that?

A. I am not so sure, but I think the Berlin Construction Company.

Q. Well, go on. What is the next concern?

A. 1910, I believe, was the next contract for the Three Forks Portland Cement Company in Montana.

Q. And from whom did you buy your steel for that plant?

A. I have forgotten the name.

Q. You do not remember?

A. No, sir; I do not remember that.

Q. Was it the American Bridge Company?

A. No, sir; it was not; it might have been the Riter-Conley Company.

Q. Have you purchased some structural from the Riter-Conley Company?

A. Yes, sir.

Q. For different plants?

A. Yes, sir.

Q. Will you name some more plants that you have built where you bought structural steel?

A. Olympic Portland Cement Company, in the State of Washington. That was in the year 1912.

Q. Who furnished the structural for that?

A. The McClintic-Marshall.

Q. That is your best recollection, McClintic-Marshall?

A. It might have been the Riter-Conley Company that supplied it in the State of Washington, and the McClintic-Marshall Company that supplied it in the State of Montana.

Q. Do you remember any other plants you built?

A. My recollection serves me better now; that was the Minneapolis Steel Company, of Minneapolis.

Q. The Minneapolis Steel & Machinery Company?

A. The Minneapolis Steel & Machinery Company; they supplied the steel for the Montana plant.

MR. DICKINSON: What year was that?

THE WITNESS: That was in the year 1910.

By MR. SEVERANCE:

Q. Well, now, you built some other plants outside of the ones you have mentioned, have you?

A. Yes, sir.

Q. Do you remember where you placed the orders for steel, or don't you remember?

A. Yes, sir. We are building a small shop of our own at the present time in Elizabeth, a machinery shop in Elizabeth, New Jersey. The structural steel for that was purchased from the McClintic-Marshall.

Q. Have you built any portland cement plants during the present year, 1913?

A. No, sir.

Q. Now, at these various plants that you have mentioned, where you bought structural, was or was not the American Bridge Company a bidder for the furnishing of that material?

A. In almost every case.

Q. Did it secure the contract in any of these cases?

A. No, sir.

Q. Were the prices quoted you by different bidders varying or uniform?

A. Varying.

Q. And were or were not the contracts let upon a competitive basis?

A. Yes, sir.

Q. Was the tonnage considerable or small?

A. In some cases it ran as high as 1,300 and in other cases it ran quite small. For instance, in our present small shop at Elizabeth——

MR. DICKINSON: You mean 1,300 tons.

THE WITNESS: 1,300 tons. For our present small shop at Elizabeth probably not more than 80 or 90.

MR. SEVERANCE: You may examine.

(Whereupon a recess was taken until 2 o'clock p. m.)

AFTER RECESS.

HUGH W. LOGAN,

the witness under examination at the taking of recess, resumed the stand.

CROSS EXAMINATION

By Mr. Colton:

Q. Since December, 1909, I believe you said that the Smidth Company has been a purchaser of bars and rods. Is that correct?

A. Yes, sir.

Q. In December, 1910, you had occasion to ask several of the different companies for bids?

A. Yes.

Mr. Severance: 1909, did you say, Mr. Colton?

Mr. Colton: 1910.

Mr. Severance: He did not say anything about 1910 on direct examination, did he?

Mr. Colton: This is cross examination.

Mr. Severance: From the way in which you framed your question I thought you were quoting from something he said on direct examination.

Mr. Colton: No.

The Witness: It is correct in 1909 or 1910; either one would be correct.

By Mr. Colton:

Q. And at that time you found that Jones & Laughlin, the Carnegie Steel Company, and several others, put in the same bids?

Mr. Severance: No. He testified to the contrary.

The Witness: Not all of them; not all of the companies that were requested to bid; not all of them quoted the same price.

By Mr. Colton:

Q. But several of them, including the Carnegie Steel Company and Jones & Laughlin did bid identically the same? Is that correct?

A. I am not quite positive that it is so, but there were many bids that were the same identically.

Q. And the Carnegie Company was among those that were the same in their bids. Is that right?

A. Yes.

MR. SEVERANCE: The same as what?

MR. COLTON: The same as the others. He said several of them bid the same, and the Carnegie Company was the same as the others. I think it is clear.

MR. SEVERANCE: I do not think he understands what he is saying. It is contrary to what he said on direct examination. He said the bids were not uniform.

By MR. COLTON:

Q. Referring to this bid that was taken about December, 1910, to what company did you then award your purchases, or to what companies did you then award them?

A. There were one or more. I should say that the Buffalo Company was awarded some part of that contract; the New Haven Company was awarded some part of the business.

Q. How about the Faitoute Iron & Steel Company?

A. Not at that time.

Q. The New Haven Iron & Steel Company at that time was generally engaged in selling that class of products?

A. Yes, sir; so far as I know.

Q. During the year 1911 did you have several occasions to secure bids from different companies?

A. Yes, sir.

Q. And on those occasions did you find that the Carnegie Steel Company and several of the other manufacturers put in identically the same bid?

A. No, sir.

Q. Did you not find on one or more occasions during 1911, the Carnegie Company bid the same as some of the other companies bid?

A. They bid the same as some of the other companies, yes.

Q. Then did you not find that several companies bid the same price?

A. Yes, sir.

Q. And the Carnegie Company was among those companies?

A. Yes, sir.

Q. And that was your experience on several occasions during the year 1911?

A. Yes, sir.

Q. You buy your structural steel erected, do you not, Mr. Logan?

A. Yes.

Q. And into the erected steel there enters not only the consideration of price per ton for fabricated steel, but also the cost of putting up the erected steel? Is that correct?

A. Always.

Q. Do you buy your structural steel erected only; that is, is all the steel you buy bought as erected steel?

A. Yes, sir.

Q. You buy no plain material whatsoever?

A. No, sir; no plain structural steel.

Q. By plain structural, I mean structural other than fabricated structural steel.

A. No, sir.

Q. Do you buy any fabricated structural steel that is not bought as erected?

A. We have never.

MR. COLTON: That is all.

REDIRECT EXAMINATION.

By MR. SEVERANCE:

Q. Mr. Logan, what was the total amount of your purchases of bars during the four years in question?

A. Approximately 6,000,000 pounds, or 3,000 tons.

Q. Scattered through the various years about evenly?

A. 1910 was probably the heaviest year; 1911 slightly under it, and 1912 probably less than 1911.

Q. Of that 3,000 tons that you bought, the Carnegie Company furnished only a little over 200, did it not?

A. 200 tons?

Q. Yes.

A. Yes, sir.

Q. Out of the 3,000?

A. Yes.

Q. And you found competitive bids in every case?

A. Yes, sir.

Q. Some of the bids were lower than others?

A. Evidently, when the orders were placed elsewhere.

Q. You placed the orders wherever you could get the best price?

A. Yes; that in conjunction with service and delivery.

Q. It happened, you said, that in one or two cases the Carnegie quoted the same price as some of the others, but not all of the others?

A. Not all of the others, no sir.

Q. And your business was conducted, I think you testified this morning, among quite a large number of different concerns at different times?

A. I would say that probably fifteen or more concerns have bid on this particular product.

Q. And how many different ones did you buy from?

A. Including the jobbers and mills direct, probably eight or ten companies.

Q. And you bought from them on the basis of price and other things that indicated to you that theirs was the best place to purchase in each case?

A. Yes.

Q. And the competition existed in each case?

A. Yes, sir.

RECROSS EXAMINATION

By Mr. Colton:

Q. In 1910 what different manufacturers did you buy from?

A. We bought from the Carnegie Steel Company in 1910; we also bought from the Jones & Laughlin Company in 1910; and the Buffalo Steel Company and the New Haven Steel Company. There may have been others, but I am not sure.

Q. You do not recall any others, do you, for the year 1910, any other manufacturing companies from whom you bought?

A. No.

Q. Take the year 1911; from what different companies did you purchase?

A. The Buffalo Steel Company, the Franklin Steel Company, and possibly the American Iron & Steel Company.

MR. SEVERANCE: Where is that located, do you remember?

THE WITNESS: At Lebanon and Reading, Pennsylvania.

By MR. COLTON:

Q. Now, since 1911 with what manufacturing companies have you placed your orders?

A. Practically all with two companies, the Buffalo Steel Company and the Faitoute Company. The Faitoute is not a manufacturing company, but are the agents of the Franklin Steel Company, of Franklin, Pennsylvania, or representatives.

Q. Now, since 1911 have you solicited bids?

A. Yes.

Q. From what companies?

A. Well, it might be better to answer that question in this way, that the representatives of the various steel companies, or the jobbers, were continual callers soliciting business, and from them we secured bids, but I have no written record of their quotations, always oral and verbal quotations being made.

Q. Then, as I understand it, you have not solicited bids since 1911; is that correct?

MR. SEVERANCE: He has not testified that he ever solicited bids, has he?

THE WITNESS: Yes, but we would not make it a general practice to write to a dozen companies or half a dozen companies; we would solicit quotations from the two companies that most of the business has been placed with, those are the Buffalo Steel Company and the Faitoute Steel Company.

By MR. COLTON:

Q. As I understand it, since 1911 you have not written to the different companies as a rule?

A. Not in the same general sense that we did when we started to purchase these in large quantities in 1910.

Q. And then you solicited bids in 1911?

A. Yes, to some extent, but not to the same wide extent that we did in the early purchases.

Q. Now, you may have stated it, but I just want to be clear on the subject; from what different manufacturing companies have you purchased your rods since 1911?

A. The Buffalo Steel Company and the Faitoute Iron & Steel Company, and I might state Ryerson, who was a jobber.

Q. You purchased some from him also?

A. We purchased some from him; that was delivered in the early part of this present year, 1913. Those bars were being made by the Jones & Laughlin mills.

Q. But they were purchased from Ryerson?

A. Yes.

By Mr. Severance:

Q. Made by Jones & Laughlin?

A. Yes.

WILLIAM SMITH

was called as a witness on behalf of the defendants, and being first duly sworn, testified as follows:

DIRECT EXAMINATION.

By Mr. Reed:

Q. Where do you live?

A. Flushing, Long Island.

Q. What is your occupation?

A. Manager for John Hassall, Incorporated.

Q. How long have you been manager for John Hassall, Incorporated?

A. About fifteen years.

Q. About fifteen years?

A. Yes; I have been with them thirty years.

Q. You have been with Mr. Hassall for thirty years?

A. Yes.

Q. When was this company incorporated?

A. About 1906.

Q. How long has Mr. Hassall himself been in business?

A. Since 1850.

Q. What business has he been in?

A. The manufacture of wire nails and rivets.

Q. What has been the business of John Hassall, Incorporated?

A. The same.

Q. And you have been manager since about 1898, have you?

A. About fifteen years, yes.

Q. Who has charge of the purchases of supplies that are made for your corporation?

A. I have.

Q. Who has charge of the sales?

A. I have.

Q. What steel product do you buy?

A. Finished wire.

Q. Steel wire?

A. Iron and steel wire.

Q. And you make that up into nails?

A. And rivets.

Q. And do you draw any wire yourself?

A. Not any.

Q. What range of sizes of wire nails do you make?

A. From the smallest to seven inches by five-sixteenths inches.

Q. The largest is one seven inches long and five-sixteenths of an inch in diameter?

A. That is it.

Q. And you make the very smallest that are made?

A. Yes.

Q. How many nail machines have you in your factory now?

A. I think over 80; 80 or 85.

Q. How many had you in 1901?

A. About 50.

Q. From what companies are you now buying your iron and steel wire?

A. We buy from Igoe Brothers, Brooklyn and Newark.

Q. Brooklyn or Newark?

A. Yes; the office is in Brooklyn and the mill is in Newark.

Q. What other companies?

A. The Washburn Wire Company of Phillipsdale, Rhode Island.

Q. Any others?

A. Not lately.

Q. Did you ever buy from the Cambria Steel Company?

A. Yes; the Cambria Iron & Steel Company.

Q. Did you ever buy from the American Steel & Wire Company?

A. Yes, and also John A. Roebling's Sons Company, Trenton, New Jersey.

Q. How do you ordinarily buy, by annual contracts or by contracts for particular tonnages?

A. We buy from time to time; no particular time.

Q. For particular tonnages?

A. Not always, no. Sometimes we buy a certain tonnage, and then again as our requirements demand it.

Q. When you are about to make such a contract, or when you desire to place a particular order, how do you ascertain the prices that you can buy it at?

A. Send out inquiries, to different ones.

Q. In what manner, Mr. Smith, by telephone or by mail?

A. Sometimes by mail, sometimes by phone.

Q. Do salesmen from all of the wire manufacturers call at your plant?

A. Yes.

Q. And you get qoutations in all of these ways, do you?

A. Yes, sir.

Q. What can you tell us as to the prices that are quoted you by these different manufacturers? Are they the same in response to an inquiry at any particular time, or do they vary?

A. They will vary. There may be two alike, but they will vary.

Q. What range of variation, ordinarily, do you get in the responses to a particular set of inquiries?

A. 50 cents to $1.50 a ton.

Q. What is approximately the present market value of a ton of wire of the kind that you use?

A. At the base price today about $30.

Q. Then the variation runs from 50 cents to $1.50 on quotations around $30?

A. Today.

Q. I mean it is a $30 product that varies as much as you have told us?

A. Yes. I am giving you the lowest.

Q. I understand that. You are giving the lowest present quotations for that kind of wire?

A. Yes, sir.

Q. I simply wanted to get a general idea as to the value of that kind of wire without caring particularly for the quotations today.

A. Yes, sir.

Q. How long has it been the case that the prices quoted to you have varied in this way?

A. They have always varied.

Q. Have you ever observed anything which would indicate that the manufacturers of such wire do agree among themselves to maintain the price?

MR. COLTON: Just a moment. I object on the ground that this calls for a conclusion upon a state of facts in the witness' mind that is not disclosed.

THE WITNESS: No.

By MR. REED:

Q. Have they solicited your orders by salesmen and by mail and in other ways?

A. Yes, sir.

Q. So far as you have been able to observe has there been genuine and active and actual competition among the manufacturers of such wire for your business?

MR. COLTON: Same objection and the further objection that the question is suggestive and leading.

THE WITNESS: Yes, sir.

By Mr. Reed:

Q. Now, coming down to your own products, Mr. Smith, I think you said you made wire nails and rivets?

A. Yes, sir.

Q. Is there any manufacturer in the United States who has made wire nails as long as you or was your concern the pioneer?

A. We claim to be the pioneers.

Q. Do you believe yourselves to be?

A. Yes, sir.

Q. You think the claim is truthful, do you?

A. Yes, sir.

Q. Will you state whether or not the products that you make are sold in competition?

A. Yes, sir.

Q. Have you many competitors in the manufacture of wire nails in this country?

A. Yes, sir.

Q. And how long has that been the case, that such nails were sold in competition, Mr. Smith?

A. Always.

Q. Does that competition extend to the prices that are quoted?

A. Yes, sir.

Q. Has that competition in which you are engaged with other manufacturers of nails at any time been restrained by any combination or pool, and if so, when?

Mr. Colton: That is objected to on the ground that it calls for a conclusion by the witness upon a state of facts that may be in his own mind and not disclosed to the Court.

The Witness: Yes.

By Mr. Reed:

Q. When was that pool?

A. As far as I can remember, in 1899 or around 1900.

Q. Was your concern a member of that pool?

A. Not directly.

Q. How long did that pool last, to your knowledge?

A. With us about six months.

Q. Do you know when it was broken up, dissolved?

A. About the middle of 1900.

Q. Has there been any pool among the manufacturers of wire nails in this country to your knowledge since the summer of 1900?

A. No.

MR. REED: Cross examine.

CROSS EXAMINATION

By MR. COLTON:

Q. Have you got your business card with you, Mr. Smith?

A. Yes. (Produces card and hands it to Mr. Colton.)

Q. I notice that your card reads "John Hassall, Incorporated, Rivets, Escutcheon Pins, Special Wire Nails." Those products here named on the card are your principal products?

A. Yes, sir.

MR. LINDABURY: The card seems to indicate that they are made of all metals. You left that out.

MR. COLTON: You can ask him about it on your examination, if you like.

MR. DICKINSON: Do you mean to say that these things are made of all metals?

MR. LINDABURY: I see that at the bottom; that is my inference.

By MR. COLTON:

Q. I have not asked you anything about all metals, which happens to be at the bottom of your card; wire nails are not made of all metals, are they?

A. Yes, sir.

Q. They are made of all metals?

A. Yes.

Q. What is the primary product that goes into wire nails?

A. Iron.

Q. What is the primary product that goes into steel wire nails?

A. Steel.

Q. What percentage of your business is iron?

A. Seventy-five per cent.

Q. Seventy-five per cent is iron?

A. Yes, sir.

Q. And only 25 per cent. of your business is steel, in wire nails?

A. Iron and steel; it is supposed to be the same in wire nails. They were formerly called iron wire nails and now they are called steel wire nails.

Q. And your wire nails, then, are all made of steel; is that correct?

A. Yes, sir.

Q. You have other nails that are not made of steel at all; is that correct?

A. Yes.

Q. What different metals are they made of?

A. Copper, brass, monelle metal, aluminum—anything anybody wants; silver or gold, if they want it.

Q. What size of wire do you purchase for the manufacture of wire nails?

A. From 5/16 of an inch up to No. 24 gauge.

Q. How far back does your connection with the purchase of this wire go?

A. Oh, I should think 20 years.

Q. You have been purchasing wire in the same form for 20 years?

A. Yes, sir.

Q. From what different companies did you purchase wire prior to the organization of the American Steel & Wire Company?

A. From the H. P. Nail Company in Cleveland; the Washburn & Moen Wire Company of Worcester, Massachusetts.

Q. Any others?

A. I think they were the principal producers at that time; and Cooper-Hewitt Company.

Q. The first two you have named, you think, were the principal producers at that time of the class of wire that you were purchasing?

A. Those three.

Q. Did those two companies that you first named compete for your business?

A. Yes, sir.

Q. And both companies that you first named were afterwards acquired by the American Steel & Wire Company of New Jersey?

A. Yes, sir.

Q. What tonnage in steel wire nails were you manufacturing approximately in the year 1899?

A. I should say around 500 tons a year.

Q. And was it in the year 1899 that your company was indirectly in a wire nail pool?

A. Yes; 1899 or 1900; about that time.

Q. What were the different members of that pool?

A. We did not know anything at all about it. We were indirectly connected with it.

Q. What do you mean by being indirectly connected with the pool?

A. A. R. Whitney & Company, of this city—I do not know whether you know of them or not—made a proposition to us to sell all of our large sizes to them only. I believe that they had made some arrangement with the pool.

Q. And you do not know what other companies had similar arrangements?

A. I do not know of any others that did have a similar arrangement. We were too small, I suppose, to be considered.

Q. What was your tonnage in 1901 in wire nails?

A. Oh, something pretty close to that.

Q. And in 1902?

A. It varied very little before that.

Q. And in 1903?

A. It was gradually advancing and increasing.

Q. How much? About what, in tonnage?

A. 100 tons a year.

Q. 100 tons in wire nails a year?

A. Yes. Not as much as that. Our present tonnage today is about 1,200 tons.

Q. You are a very small manufacturer of wire nails, as compared with such a company as the American Steel & Wire Company, are you not?

A. We are not to be considered at all.

MR. COLTON: That is all.

CHESTER A. WALES

was called as a witness on behalf of the defendants, and being first duly sworn, testified as follows:

DIRECT EXAMINATION

By MR. LINDABURY:

Q. I believe that you are connected with the Federal Signal Company. Am I right?

A. I am.

Q. Where is that located?

A. At Albany, New York.

Q. What is its business?

A. Manufacturing railway signals and railway signal appliances.

Q. How long has that company been in business?

A. Eight years.

Q. How long have you been connected with it?

A. Eight years.

Q. Since the beginning?

A. Since the beginning.

Q. Does that consume steel products?

A. It does.

Q. About what quantity per year, in tons?

A. About 3,500 tons.

Q. Do you buy pipe?

A. We do.

MR. DICKINSON: Is that in addition, or included in the 3,500 tons?

By Mr. Lindabury:

Q. That 3,500 tons covers all steel products?

A. Yes.

Q. Part of those steel products consist of pipe?

A. Pipe and pipe poles; steel bars, shapes, bolts, nuts, nails; practically the entire line, including wire.

Q. What kind of wire?

A. Steel wire.

Q. Where do you buy your steel?

A. Wherever we can buy it the cheapest.

Q. Do you buy a considerable tonnage of pipe?

A. We buy about 800 tons of pipe and about 350 tons of pipe poles.

Q. What do you use the poles for?

A. They are used as signal poles.

Q. On railways?

A. On railroads.

Q. What do you use the pipe for?

A. For connections between signals. It is known as the ground connection in the signal business.

Q. How do you buy your pipe, on a competitive basis or otherwise?

A. On a competitive basis.

Q. Strictly so?

A. Strictly.

Q. Does that competition extend to and include prices?

A. It does.

Q. How do you arrive at the prices?

A. It depends upon conditions. If the conditions seem opportune for a six months' contract or a year's contract, we ask that propositions be submitted along those lines, and we select the lowest bidder.

Q. Has that been your course of business during the whole period of eight years?

A. It has.

Q. From whom have you invited bids?

A. The Republic Iron & Steel Company; the Youngstown Sheet & Tube Company; the La Belle Iron Works; Mark Manufacturing Company, and the National Tube Company.

Q. How have your contracts been distributed?

A. For the last two years we have purchased from the Youngstown Sheet & Tube Company; for the two years prior to that from the La Belle Iron Works: for the four years prior to that from the National Tube, and some of the others; I do not just recall which ones, through the whole four years.

Q. Were the quotations of these different concerns from time to time uniform with each other or variant?

A. They were variant.

Q. Has that or not been the case throughout the whole period of eight years?

A. It has.

Q. Have the quotations been the same at different times, or have they also varied with the times?

A. Varied with the times, according to the condition of business generally.

Q. Where do you get your poles?

A. We have been buying our poles for the last two years from the Electric Railway Equipment Company, who use either the Youngstown Sheet & Tube or La Belle Iron Works product in the manufacture of it.

Q. Have you bought poles from any other concern?

A. Not during that period.

Q. Before that time?

A. Yes. We bought from the National Tube Company and E. P. Morris & Company, the Electric Railway Equipment Company and the Pittsburgh Pole and Forge Company.

Q. Approximately what percentage, covering the whole period of eight years, did you buy from the National Tube Company?

A. Why, possibly through the eight years we bought all told the poles that we required for two full years, that is as near as I can give it.

Q. That would be about twenty-five per cent.?

A. Approximately.

Q. That is what you mean?

A. Yes.

MR. DICKINSON: Does he mean 25 per cent. distributed,

or that out of the whole eight, if you took all that you bought from them, you mean it would be two out of the eight?

MR. LINDABURY: You mean the two years out of eight?

MR. DICKINSON: Well, does it mean that he only dealt with them two years?

MR. LINDABURY: No, he said, "from them on and off for eight years," and his answer to my question is that the amount altogether that he has purchased from them would be two full years' supply, which I then interpreted to be the equivalent of 25 per cent.

THE WITNESS: Approximately.

By MR. LINDABURY:

Q. That is what you meant, is it?

A. Yes, sir.

Q. You have bought approximately 25 per cent.?

A. Approximately 25 per cent. of the poles we have used in the last eight years came from the National Tube Company; that is as near as I can give it.

Q. How were those poles purchased, on a competitive basis or otherwise?

A. Strictly on a competitive basis.

Q. Did that competition extend to and include prices?

A. It did.

Q. How did you ascertain prices?

A. We inquired the prices, and also as to the period of time manufacturers were agreeable to covering us, and awarded the contract to the man who quoted the lowest price, invariably.

Q. Did the quotations of these different manufacturers on poles agree as to amount; that is, were they uniform or not uniform?

A. They were non-uniform.

Q. Does the answer cover the whole period of eight years?

A. It does.

Q. Were the prices quoted from time to time by the different manufacturers the same, or did they also vary with the times?

A. They varied with the times.

Q. You mentioned wire; what kind of wire do you buy?

A. We buy both steel and copper in its various forms.

Q. Do you buy rubber covered wire?

A. We do. That is perhaps our biggest item.

Q. This rubber covered wire?

A. Rubber covered copper wire.

Q. How do you get that?

A. We buy that on a competitive basis strictly.

Q. Who are the competitors for that?

A. The National India Rubber Company, the Standard Underground Cable, the Hazard Company, the Simplex Electric, the Okonite, and perhaps twenty more.

Q. Did you get any from the American Steel & Wire Company?

A. We have bought from them.

Q. How much?

A. Very little.

Q. You said you bought this on a competitive basis?

A. Certainly.

Q. Did you get quotations from the different concerns you named?

A. Yes.

Q. Have those quotations been the same or variant?

A. Variant.

Q. Considerably so, or only slightly?

A. Very considerably.

Q. And during that whole period?

A. Through the whole period.

Q. There has been some evidence here of a rubber covered wire pool during a portion of that period; did you know of the existence of that?

A. Yes.

Q. Did it include this kind of wire you bought?

A. No, it did not.

Q. But which kind did it include?

A. What is known as National Electric code.

Q. How is the wire which you purchased known, by what name?

A. It is known as Railway Signal Association specification wire.

Q. That was not in the pool?

A. No, not in the pool.

Q. I do not know whether or not I asked you who does the buying for your concern?

A. I do all of it.

Q. Did you ever observe, in the purchases of these different articles that you have mentioned, any indication of the existence of an agreement or organization or arrangement between manufacturers by which prices were either fixed or maintained in the articles you have referred to?

MR. DICKINSON: That is excepted to as incompetent and calling for the opinion of the witness upon an undisclosed state of facts.

MR. LINDABURY: I cannot better it, Judge. You may answer.

THE WITNESS: I have not noticed any, on the articles that we buy.

By MR. LINDABURY:

Q. How much of that rubber-covered wire do you buy?

A. Well, if we are running to full capacity we buy $125,000 worth a year.

Q. How much of the pipe that you mentioned do you buy?

A. Of the 800 tons that I mentioned as representing a year's requirements, there is probably a million feet of that in one inch signal pipe, what is known as signal pipe.

Q. From whom do you get this rubber covered wire or from whom do you make your largest purchases of it?

A. During the last three years our chief sources of supply have been the Standard Underground Cable Company and the National India Rubber Company.

Q. And before that?

A. Before that we really were not buying enough wire to make it a big item with us. I daresay we bought from the Okonite, Hazard and Simplex, we shopped around to see where we could buy the cheapest.

CROSS EXAMINATION.

By Mr. Dickinson:

Q. What you have said as to this rubber covered wire and prices does not go back then of three years?

A. Yes, it does.

Q. I thought you stated that you did not buy enough——

A. (Interposing) Previous to the last three years.

Q. I thought you said previous to the last three years you did not buy enough of it to be of any special consequence; is that correct or not?

A. Since 1909 I do not think we have bought less than $60,000 worth a year.

Q. Well, in 1909 how much did you buy?

A. Approximately that amount.

Q. Then what did you mean when you spoke of three years, about not buying much of consequence back of three years?

A. It will take a little time to explain that.

Q. Explain it.

A. Previous to the last three years there practically was no standard of rubber covered wire for signal use. I mean by that that it is only within the last three years that the Railway Signal Association's specification has really been effective.

Q. What did you use?

A. Previous to that time each railroad company had its own specification.

Q. Then for different railroads you had to have a different kind for each company?

A. A different kind. They were practically all the same. For instance, the New York Central would accept nothing else but Okonite. Other companies would take only Kerite.

Q. Who was the first president of the Federal Signal Company?

A. Mr. John P. Cade was the first president.

Q. Who was the vice-president of it?

A. At the time he was president?

Q. The first vice-president?

A. There were two, Mr. P. G. Ten Eyck and Mr. Lawrence Griffith.

Q. Who were the first directors of the company?

A. At that time?

Q. Yes.

A. Mr. Cade, Mr. Ten Eyck, Mr. Griffith, Mr. Clarence E. Newman, who was at that time secretary, and Mr. W. W. Lavarack.

Q. What was the capital stock?

A. At that time I think the capital stock was $2,000,000.

Q. What was the first position you held with it?

A. I was chief clerk.

Q. How old were you then?

A. I must have been 21 years old.

Q. You say you were chief clerk?

A. Yes, sir.

Q. In what department?

A. All departments.

Q. You were chief clerk of the whole concern?

A. The whole establishment; yes sir.

Q. What were your duties as chief clerk?

A. To look after the correspondence and take care of all the office routine; assume the duties of practically the office management. That is what I was doing.

Q. Of an office manager?

A. Yes, sir.

Q. Did you have charge of the books?

A. No, not of the accounting.

Q. Well, who had charge of the accounting?

A. Mr. Newman.

Q. How long did you remain chief clerk?

A. Three years; two and a half or three years.

Q. What time would that bring you up to?

A. That would bring me up to five years ago, 1908.

Q. You had a president, two vice-presidents; did you have a general manager?

A. No; we had a chief engineer.

Q. No general manager?

A. I do not recall that the plan of organization at that time included a general manager.

Q. You say you do not recall that it did?

A. No, sir.

Q. As chief clerk what did you have to do with the question of purchases? Did you make contracts?

A. I handled the purchases under the direction of Mr. Ten Eyck. That is when I say "handled" I mean I took care of the detail. I requested quotations and compiled them when they were received, and placed the orders on his instructions.

Q. He controlled that end, did he, himself?

A. He did.

Q. Who awarded the contracts?

A. He did. During those three years we are talking about now?

Q. Yes; that brings it up to 1905.

A. 1905.

Q. And you had no jurisdiction, so far as awarding contracts was concerned?

A. Not at that time. 1908 that brings it up to.

Q. 1908?

A. From 1905 to 1908.

Q. During that period bringing it up to 1908, take the year 1905; what tons of steel products did you use that year?

A. That is the first year we were in existence?

Q. Yes.

A. That would be rather a hard question to answer.

Q. Can you give it approximately?

A. I can not give it to you for the whole year, because we did not go into business until April.

Q. Take 1906.

A. In 1906 we used, I should say, very close to the total that I have stated as representing our present requirements, 3,500 tons. 1906 was the best year we ever had.

Q. So as contrasted between 1906 and the present time you have not increased your business, then?

A. I would not say that. In so far as steel products are

concerned, possibly that is true, but we have developed and moved out in other directions.

Q. But I am confining it to the use of steel products.

A. I should say it was about the same.

Q. It has been about at a standstill since 1906?

A. Yes.

Q. Now, for the year 1906 did you make any contracts? If so, for what periods of time did they reach for steel products, and with whom did you contract?

A. In 1906 we bought steel from the Lackawanna, Jones & Laughlin, Union Drawn Steel Company, Carnegie.

Q. Mr. Wales, do you remember and state it as a fact that during that year you bought from all the companies that you have named?

A. Certainly.

Q. Well, now, what did you buy from the Carnegie during that time?

A. Hot rolled steel bars.

Q. Anything else?

A. That is all, from them.

Q. What from Jones & Laughlin?

A. The same; possibly a little cold rolled steel, shafting.

Q. And from the others that you have named; you mentioned one or two more.

A. Lackawanna, we bought hot rolled steel bars.

Q. And you state positively for that year that you bought hot rolled steel bars from all these companies?

A. I can make that statement.

Q. Were those on contracts; and if so, for what period of time?

A. I can not recall that. You are questioning me now about a period of time when I was not in active charge.

Q. But you have just said that you had charge of all the papers.

A. No, I said under his direction.

Q. Do you know anything, then, about the papers of which you had charge, to be able to testify about those facts at that time?

A. To some extent, yes.

Q. To the extent that I am asking you about?

A. I will ask you to repeat that last question. I did not answer it.

(The question was repeated by the stenographer as follows:)

"Q. Were those on contracts, and if so, for what period of time?"

A. I can not answer that yes or no definitely; my memory does not carry me back that far.

Q. Can you state whether or not for that year you made a single written contract with either one of these companies for hot rolled bars?

A. I can not say that we did.

Q. If those contracts were made, where would they be kept?

A. They would be on file; they would have been on file in the office of the vice-president.

Q. Of the company?

A. Yes, sir.

Q. And you filed all contracts away, did you?

A. I was in charge of that work, yes; personally I did not file them.

Q. They were filed under you, were they not, if you were chief clerk?

A. Yes, sir.

Q. Now, you can not recall, you say, a single contract with either of those companies for that year?

A. No, sir.

Q. Can you recall the prices for hot rolled bars for that year?

A. In 1906, you are asking me now?

Q. Yes.

A. I think the price was $1.50.

Q. What do you mean by $1.50?

A. $1.50 base for 100 pounds, f. o. b. cars Pittsburgh.

Q. From all the manufacturers?

A. I do not recall.

Q. What are you quoting when you quote the prices; are

you quoting prices that you say were in different contracts, or the market price?

A. I am giving you to the best of my recollection the price which was generally prevailing during the period of 1906.

Q. There was a price, then, was there, generally prevailing during the year 1906?

A. I can not say that there was one price maintained all through the year, but it is my recollection that the approximate price for bars during that year was $1.50.

Q. And it was maintained during the larger part of that year, was it?

A. I can not answer as to that.

Q. Tell us what you mean when you refer to that price and to its being the price, and the prevalent price; just explain what you mean.

A. I think the price of $1.50, as I recall, was the price at which steel bars were sold during the year 1906, generally sold.

Q. By the makers of steel bars?

A. Yes; all of them.

Q. Take 1907: What would you say as to the price generally during that year?

A. The fore part of 1907, so far as price was concerned, it was a case of paying any old price to get delivery.

Q. That is to say, you paid premiums for quick deliveries or prompt deliveries?

A. I do not think it is right to call it a premium, no.

Q. You call it "any old price." You mean by that, above the prices you had paid in 1906, or what do you contrast it with, when you speak of it as any old price?

A. I mean that steel was so very much in demand at that time, and that the mills were so far behind on orders, or, in other words, that orders were so far ahead of capacity that it was a case of where the consumer was willing to pay practically any price that he was asked in order to secure prompt shipment. That is what I mean.

Q. Do you recall any contracts that you made for any period of time for the year 1907 with any makers of hot rolled bars? If so, state who they were.

A. Well, I cannot recall a contract, no, sir.

Q. Do you recall the prices for that year at which they were made?

A. We paid as high as $1.70 Pittsburgh.

Q. To whom did you pay that, if you know?

A. I think we bought from the Republic; also from the Carnegie during that time.

Q. Are you sure?

A. I will not swear to it as a fact.

Q. I am asking you for facts and you are under oath. I want to know what you do undertake to say you know. Do you know that you made any contract with either of those two companies for that year?

A. No; I will not say that I know that we made a contract, I know we bought from them, either one or the other.

Q. Do you know whether your contracts covered long periods, or whether you bought as your needs demanded?

A. I have not admitted that we made a contract, yet.

Q. By "contract" I suppose you mean a written contract?

A. A contract and an order, to me, are two entirely different propositions. When we contract, we contract for deliveries over a specified period. We might order for immediate requirements only.

Q. For that year did you get your supplies by orders or by what you call contracts? Do you know?

A. We did.

Q. Which?

A. Both.

Q. And from both those companies, or either of them?

A. I cannot answer that definitely.

Q. You do say, now, do you—I want to understand you—that you did have a written contract with some company for that year?

A. We had either a contract or we placed orders.

Q. You do not know which?

A. I cannot say which, no.

Q. Do you remember the times of the year at which either of these contracts or orders were placed?

A. All through the year; every month of the year. We were ordering continually.

Q. But if you made any contracts, do you remember the time they were made, and what periods they ran?

A. My memory does not go back that far with sufficient clearness to say.

Q. Who solicited bids that year? You or somebody else connected with the company?

A. They were solicited by the company and in Mr. Ten Eyck's name.

Q. Who did it?

A. I did the actual work, sending out the inquiries. I signed his name, probably, to the inquiry.

MR. LINDABURY: I understand, Judge, that this inquiry is still confined to bars. Am I right?

MR. DICKINSON: Yes. I have not gone into anything else.

By MR. DICKINSON:

Q. Do you say, then, that for the year 1907 you yourself sent out any written solicitations for bids for purchases that were made that year?

A. I most certainly did.

Q. In steel bars?

A. Yes, sir.

Q. To whom did you send them?

A. We sent them to Carnegie, the Republic, Lackawanna, Cambria—all the steel manufacturers who were in a position to furnish at the time; I mean by that, whose tonnage was not so entirely taken up as to eliminate them as a source of supply. That is what I mean.

Q. Did you pretend to know how they were taken up so as to eliminate them in that way from sending you any bids?

A. Naturally I would.

Q. Then can you say which of them you excluded on account of their tonnage being taken up for that year?

A. I cannot say that.

Q. Can you say that you did solicit that year, and positively whom you did?

A. I just answered that we bought from the Republic and Carnegie during that period.

Q. But I am asking you to give others.

A. And they must have been asked to bid, if we bought from them.

Q. They might have asked you, might they not? Did they never send anybody to solicit you?

A. Yes, sir.

Q. Do you know whether these contracts to them were made upon your written solicitation by way of bids sent out or through their sending agents to you, and in that way closing the agreement?

A. I do not see the difference.

Q. There might be a difference. It does not make any difference whether you see it or not. Just answer the question. State what you remember as the fact, if you do remember.

A. We probably asked them to quote us a price; but if Carnegie's representative came in to-day and quoted me a price, and we had an inquiry to-morrow, I cannot see the sense of sending them an inquiry, after I had their price yesterday or to-day.

Q. You cannot say, then, and you do not remember, and do not undertake to say, if I understand you correctly, that these particular contracts that were awarded to them were awarded from bids sent out by you or solicitations at your office by their agents. Is that a fact or not?

A. No; I cannot say that.

Q. You cannot say that?

A. I cannot say that definitely. I cannot go back to that day and say it.

Q. Do you remember the prices?

A. I have already said that during 1907 we paid as high as $1.70, Pittsburgh.

Q. I mean the prices at which you purchased from Carnegie and Lackawanna?

A. I did not mention Lackawanna as a source of supply during that time.

Q. The Republic?

A. The Republic and Carnegie.

Q. I beg your pardon. That is correct. Do you remember those prices?

A. It is my recollection that we bought from both of those concerns during that period at prices which ran as high as $1.70; from $1.50 to $1.70, I should say.

Q. Is that as near as you can come to it?

A. That is pretty near, I think.

Q. That is as near as you can come to it?

A. Yes, sir.

Q. You spoke of bids being variant. What do you mean by that? That during parts of the year the prices would vary from what obtained generally through another part of the year? Is that what you mean?

A. Why, yes; I mean that, and I mean also this: If our inquiry were more desirable, possibly, to the Republic than it was to the Carnegie, the Republic might be inclined to name us a more favorable price than the Carnegie, for that reason. That is what I mean, looking at it from one point of view.

Q. That means your requirements, coupled with the time within which you wanted them?

A. Yes; and you can look at it in another way.

Q. I am not looking at it in any way. I want to get at what you know, simply. That is all.

A. If conditions were good through the first six months of the year, certainly there would be no inclination on the part of the manufacturers to lower the price to a point below that that they are getting during those first six months.

Q. That is a sort of a generalization, is it not? That is your conclusion as to what might be as conditions might change from time to time?

A. Yes, sir.

Q. And it is not any distinct recollection that you have of any particular conditions at any particular time, from which you speak?

A. Not during 1907. We are still speaking of 1907?

Q. Yes. That is the year we are talking about.

I think you said that in the first part of 1907 you paid "any old price." Did that change during 1907?

A. It did.

Q. And then the prices steadied?

A. The price dropped right out. The market dropped right out in October or November.

Q. Of 1907?

A. Yes.

Q. How long did it stay dropped out?

A. So far as our business is concerned we really have not had a good year since then; that is, a big year.

Q. You mean, when prices dropped out?

A. No; I did not refer particularly to our own products. I did not mean that when I said prices dropped out. I mean that the prices of steel bars——

Q. You mean that the prices of steel bars dropped out?

A. Took a constant decline.

Q. The latter part of 1907?

A. The latter part of 1907.

Q. And did they never rally?

A. Oh, yes.

Q. That is what I want to know, how long before they did rally?

A. Well, I think the lowest price that we were quoted in two years following was $1.10.

Q. When was that?

A. The years following 1907, since November, 1907.

Q. But I want to know when you got that lowest price.

A. I could not give you the exact month in the year.

Q. I understand you to say it was some time within two years.

A. Some time within two years following, the lowest price was $1.10, and from that it went back, from $1.10 the price was advanced to I think $1.29, and then there was another weakening, and the price went farther down, to $1.15 and gradually back until it attained its present level, which seems to be $1.40.

Q. How long has it been at that level?

A. $1.40, since January 1st of this year.

Q. What do you use these hot rolled bars for?

A. The general production of signal material.

Q. You said you bought pipe; in 1906 from whom did you buy pipe, and how much?

A. In 1906 I think the pipe we bought during that year would be from the National Tube Company.

Q. All of it?

A. I cannot answer yes or no to that.

Q. Well, how much?

A. I recall one order, I think, which was placed during that year for 250,000 feet.

Q. How much would that be in money, about?

A. About $12,000, around there approximately.

Q. Well, take the following year; how much pipe did you buy and from whom did you buy it? That would be 1907.

A. The following year, 1907?

Q. Yes.

A. I think we also purchased from the National Tube Company that year.

Q. All of your requirements for that year?

A. I cannot say as to that, whether we bought all or not.

Q. Did you buy the bulk of it from them?

A. We had one large order with them; I can not just recall the size of the order, what it amounted to.

Q. Do you know anybody else that you had a large order for pipe with that year except the National Tube Company?

A. Yes; we placed a pretty fair sized order with the Cohoes Rolling Mill.

Q. Any other?

A. That is all that I can recall.

Q. How much did you get from each, according to your recollection, that year, in money?

A. Why, I couldn't answer that, because I can not recall even the approximate quantities we purchased; if I could I would be able to answer.

Q. Did you buy on contracts running over your requirements, or did you buy as emergency demanded?

A. I can not remember about that any more than I do on

bar steel; I can not remember whether we thought it best to do it that way or to buy from hand to mouth.

Q. And you have no distinct recollection as to that?

A. I have not on that.

Q. Have you any recollection as to prices?

A. It is not distinct.

Q. Well, have you any recollection as to whom you solicited, other than those, that year?

A. I have a recollection that we asked the National, the Cohoes Rolling Mill, and we asked the Harrisburg Pipe & Pipe Bending Company. They were active at that time; and also the Susquehanna Iron Company.

Q. Well, now, what I am calling for is whether or not you distinctly recollect and can state that you know that for the year 1907 you solicited bids from these other companies that you have named?

A. Yes, sir.

Q. But you do not know whether your purchases were made under contract or from time to time as your needs demanded?

A. I cannot recall that.

Q. And if they were contracts what periods they covered?

A. No.

Q. Or if there were contracts what periods in the year they were made?

A. No.

Q. Or how long they ran?

A. I cannot recall that.

Q. What is your recollection about the bids; the figures submitted by these different people; have you got any recollection about that?

A. I have a distinct recollection that they were probably requested to bid.

Q. You have already said that. That is not what I asked you. The question I am asking you is if you have any recollection as to the bids that they made, the prices on these several solicitations for that year?

A. My recollection is not at all definite on that, no, sir.

Q. Now, take the price of pipes during the period that you

began to become familiar with these matters and for several years thereafter, were not the market prices except when varied by special negotiation and particular cases, pretty uniform throughout long periods of time, that is to say, for months at a time for various sizes in pipe?

A. I cannot answer yes to that.

Q. Can you answer no?

A. Yes, so far as we are concerned. Of course it is necessary to understand when I say that signal pipe, because of its being special, does not come within the category of the ordinary pipe.

Q. Oh, that is a special pipe?

A. Yes, it is a special pipe.

Q. Then it would not be included within the ordinary market quotation?

A. It would not be included in the ordinary market quotation, no sir; it would not. It is special in the same sense that the wire is special.

Q. Those bars that you spoke about, how do they differ, if any, from the bars upon which base prices were quoted from time to time in the Iron Age? Were they special or were they the same?

A. They were the same bar; it is a hot rolled bar.

Q. Now, you spoke of 1906, and I understood you to say that the price was $1.50 in 1906.

A. That is my recollection.

Q. For most of the year?

A. That is my recollection.

Q. Now I will ask you if you do not recollect now, and I want to ask you to put your mind on it and see if you can recollect, that in 1907 the Iron Age quoted price at Pittsburgh was $1.60 for the whole period of 1907?

A. I said the price—in my previous statement it was my recollection that the price varied from $1.50 to $1.70.

Q. In 1907?

A. In 1907.

MR. LINDABURY: That is the actual price.

By MR. DICKINSON:

Q. Were you speaking of quoted prices, market prices; what were you speaking of?

A. I said that prices in 1907, according to my recollection, varied from $1.50 to $1.70.

Q. You were speaking of the prevalent market prices, were you?

A. Of the market price; yes, sir.

Q. You were not speaking of any particular contracts, were you?

A. No, sir.

Q. In 1908 what was the prevalent market price?

A. During the whole year?

Q. Well, if they were prevalent during a part and if there was a change and then prevalent during another part—I want you to state.

A. That is my recollection, that during the fore part of the year 1908 I think bars sold as low as $1.20.

Q. Wasn't that in 1909 instead of 1908?

A. I won't say that it was.

Q. Or that it was not?

A. Or that it was not.

Q. I believe you stated that this rubber covered copper wire that you used is not the kind embraced in the pool that you were asked about?

A. No, sir; I do not think that it was.

Q. Well, now, why do you say that?

A. Because it was special, and, as I stated to you following the first examination, at that time there had really not been a wire which was standard to all of the railroad companies, and so, therefore, the Railway Signal Association wire, or as much of it as was purchased at that time by the railway companies who had adopted it, was not a big enough item to be worth including in any combination or pool. That would be my individual opinion.

Q. So that the rubber covered copper wire which you have testified to, and in regard to prices of it, and so forth, was really a small item of wire to take the entire market?

A. From the manufacturers' viewpoint; not from our viewpoint.

Q. I know, because it was everything to you, you used that and nothing else?

A. Yes, sir.

Q. But I mean, take the volume of wire sold in the United States, it was infinitesimal, was it?

A. Yes, sir.

Q. And it was a special wire, upon which you say you got special prices?

A. Yes, sir.

Q. Coming back to steel bars: Do you remember a break that came in the price in 1911, when there was an open market, competition was sharper and more aggressive than it had been?

A. I am trying to place that as being in 1911 or the forepart of 1912.

Q. I will tell you something about it that may bring it to your mind. Do you know anything about the Republic Iron Company cutting prices and then an open market following?

A. Yes, sir; I recall that.

Q. Wasn't that in the year 1911? You do recall a break in the market coincident with that?

A. There was a break, yes.

MR. DICKINSON: That is all.

REDIRECT EXAMINATION

By MR. LINDABURY:

Q. Just a question or two. How active was the competition and how variant the quotations in this rubber covered wire that you bought?

A. It was very active, and the prices varied as between manufacturers, as much as 15 per cent.

Q. And is that true of the whole period that you refer to when you were buying that wire?

A. Yes, sir.

Q. How many competitors were there for your trade in that wire?

A. Ten or a dozen at least.

Q. And were they all active?

A. Yes, sir.

Q. Did that not indicate to you anything as to whether there was a combination on prices?

MR. DICKINSON: That is objected to as argumentative.

THE WITNESS: It indicated that there was not.

By MR. LINDABURY:

Q. How high a price did you pay for bars in 1907; I think you mentioned it?

A. $1.70, my recollection is, was the highest price.

Q. Do you remember the lowest price you paid for bars?

A. $1.50.

Q. And did you pay any intermediate price at any time during the year?

A. I daresay I did.

Q. But your recollection is definite as to those two extremes, is it; $1.50 and $1.70?

A. I can answer that yes.

MR. LINDABURY: That is all.

RECROSS EXAMINATION

By MR. DICKINSON:

Q. Some of those were hurry orders, weren't they, on your part, where you wanted quick delivery?

A. Why, yes.

MR. DICKINSON: That is all.

By MR. LINDABURY:

Q. From whom did you buy for quick delivery, do you remember?

A. I have already mentioned that our two sources of supply during that period, I think, were the Carnegie Steel Company and the Republic Iron & Steel Company. That is the best of my recollection.

Q. From which do you think you bought for quick delivery, if either of them?

A. I think we bought from both; that is my recollection.

Q. And did you pay any special price, or did you pay the price that was prevailing at the time?

A. It might not at the time have been the quoted price that we paid, but it was the best price that we could get to get the delivery which we needed to carry on our business successfully.

Q. And when you bought it at your lowest price was that always the quoted price, the newspaper price?

A. No.

Q. Were the prices that you paid from time to time on any of these products the newspaper price?

A. They have been, at different times, the newspaper price. Of course, that is my job, to pay as low as I can.

Q. Were they at all times the newspaper prices?

A. No, sir.

Q. Ever above it?

A. Yes.

Q. Ever below it?

A. Yes.

Q. A considerable part of the time one or the other—either above or below?

A. On some commodities almost invariably they never hit it right.

By Mr. Dickinson:

Q. To whom did you pay that $1.50?

A. I can not recall with any more definiteness.

Q. You can not name what company you got it of?

A. No; as I have already said. As I recall, the two sources of supply that we had on steel bars during 1907 were Carnegie and the Republic.

Q. But you do not know to which one you paid the $1.50?

A. I do not.

Q. Are you sure it was $1.50 instead of $1.60?

A. No; my recollection is that we had a contract at $1.50, and because deliveries were so slow at that price we had to go out and buy at the price which would secure delivery for us in the time we needed it.

Q. When was that contract that you now remember, for $1.50?

A. Probably it was made in 1906.

Q. With what company was it?

A. I can not recall that. I would be glad to do it if I could.

Q. You do not know how long it was to run?

A. No; I can not say definitely how long, nor can I say the exact tonnage that we contracted for.

Q. So you remember the price, but you do not know with what company you made it or when you made it or the tonnage? Is that correct?

MR. LINDABURY: That seems to be three questions, Judge.

THE WITNESS: I will have to leave it stand that way.

MR. LINDABURY: If he says yes or no to that question, which one of the three questions will it apply to?

By MR. DICKINSON:

Q. And you think that contract was made in 1906?

A. It probably was, or right after the first of the year 1907. It would only take about five minutes to give the whole thing in detail.

Q. We have had you here more than five minutes, considerably.

A. I mean if I had the records; and I should be very glad to bring them down.

Q. It was either in 1906 or 1907 that it was made?

A. Some time during that period.

Q. 1906 or 1907?

A. Yes.

MR. DICKINSON: That is all.

MR. LINDABURY: You bought everything in some year or other, I suppose?

THE WITNESS: Oh, yes.

ROBERT J. MAHARG

was called as a witness on behalf of the defendants, and being first duly sworn, testified as follows:

DIRECT EXAMINATION.

By Mr. Lindabury:

Q. Mr. Maharg, I believe you are President of the Selzer-Klahr Hardware Company; am I right?

A. You are correct.

Q. Where did you get that name?

A. They are both good men.

Q. They are the names of two gentlemen, are they?

A. Yes. Mr. Selzer one and Mr. Klahr the other. Mr. Selzer, unfortunately, has gone beyond. Mr. Klahr is still with us.

Q. You are jobbers in hardware in the City of Philadelphia?

A. Yes, sir.

Q. How long have you been in business?

A. Since 1857, I believe.

Q. How long have you been personally connected with the business?

A. About 34 years.

Q. How long have you been president of the company?

A. Going on four years.

Q. Do you handle wire nails?

A. We do sir.

Q. Do you handle other wire products?

A. We handle fence wire and wire nails and we handle poultry netting also.

Q. From whom do you get your poultry netting?

A. We get our poultry netting from Gilbert & Bennett at Georgetown Connecticut; the New Jersey Wire Cloth Company at Trenton, and the Wright Wire Company at Worcester, Massachusetts.

Q. Do you get any of it from the American Steel & Wire Company?

A. No.

Q. Have you during the last twelve years?

A. No; they have not been cheap enough, I am afraid.

Q. How do you know?

A. Well, I do not know how we know these things, but we

got that impression. They have not canvassed us very hard, I imagine, on poultry wire. I don't know.

Q. Where do you get your nails?

A. From the American Steel & Wire Company.

Q. How long have you been doing that?

A. I should say we have been getting them altogether and all from the American Steel & Wire Company for about nine years.

Q. Before that where did you get them?

A. Before that we got them from the Salem Nail Company, I think, at Salem; the H. P. Nail Company at Cleveland; Jones & Laughlin; the Pittsburgh Steel Company; the New Castle Wire Nail Company. I think that is about all I recollect now.

Q. But you settled down on the American Steel & Wire Company about the time you mentioned?

A. About, I should say, for the last nine years, we have not bought any nails outside of the American Steel & Wire Company.

Q. How does that happen?

A. Well, they have treated us so clever, so uniformly clever, that we concluded that we had better stick right to them.

Q. What is your definition of the word "clever" in that connection?

A. By "clever" I mean to say this—I will have to amplify that a little bit, I think, so that you will understand what I mean.

Q. That is a Scotch definition of the word "clever?"

A. Yes. Previous to our very satisfactory dealings with the American Steel & Wire Company, we had to be right on the job, and we are yet as far as that goes, as regards getting prices, etc.—and it was a case of take them in and pay for them, and that settled it. Since we have been dealing with the American Steel & Wire Company, we have been enabled to make contracts that covered our requirements for periods that suited us very much better.

For that reason we are perfectly satisfied with our connections on the nail business.

Q. What product do you buy most of?

A. In fence wire, for instance?

Q. No, wire products, nails and wire products.

A. We handle 75 per cent. of our wire products in nails and 25 per cent. of fence wire. I am leaving out the poultry wire, you understand, entirely. Understand, I am just talking now about fence wire and wire nails.

Q. Seventy-five per cent. consists of wire nails. How much wire nails do you use?

A. Well say from 20 to 25 carloads.

Q. A year?

A. A year.

Q. And your market is where?

A. Our market is in Pennsylvania, Delaware, Maryland and New Jersey.

Q. And do you handle these products as brokers, or do you carry a stock?

A. We carry a stock.

Q. For immediate delivery?

A. For immediate delivery. We haven't got much time for brokers on the side.

Q. Why?

A. It is pretty hard competition running up against a broker, who has nothing but an office chair and a desk and a stenographer. He is rather satisfied to make a low quotation, and he can do it too, and I tell you it bothers us people who carry a stock to sometimes meet him.

Q. You are nevertheless able to carry on your business?

A. Oh, yes, and make a profit on nails.

Q. You do?

A. Yes.

Q. Do you sell at the same price that these other people do?

A. I can not say that we do, no; I do not believe in selling nails as a football, being kicked around the block and so forth. We make a profit.

Q. How can you sell it in competition with people who sell without profit?

A. Well, they sell nails and sometimes they don't deliver them. Where we make a quotation on nails, we give service. We are noted, sir, for quick shipments.

Q. Have you a reputation on service?

A. I think so. I am glad to say that we have a reputation on that.

Q. Are you able to get a better price than those who have not that reputation?

A. I think so; but it all depends on the salesman and the person. I am a great believer in the personality of a salesman and his ability to get a fair price and not be ashamed to ask for it.

Q. You must exercise special care in the selection of your salesmen?

A. We try to, and it is one of the very hardest propositions we are up against, a very hard proposition.

Q. You have met Mr. Frank Baackes, I suppose?

A. I have met Mr. Baackes several times, just shook hands with him, that is all. I recognize him, though, because of his personality.

Q. In the course of your business do you get quotations from other manufacturers on nails?

A. Yes.

Q. Frequently or not?

A. Yes, we get them frequently, and unsolicited, very largely.

Q. And from how many concerns do these frequent and unsolicited quotations come?

A. Well, I would say two or three, three or four times some months; two or three anyhow.

Q. That is the number of times?

A. That is the number of times.

Q. But the number of the concerns whose representatives solicited?

A. It has dwindled down to probably three or four; I should imagine that maybe at that time they didn't get orders enough to come around; just like our salesmen, they get cold feet.

Q. I suppose it does have a cooling effect, to go away without any orders?

A. Undoubtedly; I can appreciate that.

Q. Time after time?

A. Yes.

Q. You got more quotations in the early days?

A. Yes.

Q. I am speaking of a period of ten years, now. How many on the average have quoted you prices during that period beside the American Steel & Wire Company?

A. In the aggregate, do you mean?

Q. On the average, about how many concerns have quoted you prices?

A. I would say, take an average for the ten years, probably—I would not think it would be over five or six.

Q. How many times a year, about, have you been visited by their salesmen and received quotations?

A. The only time they seem to come in to see us is when there seems to be a weakening tendency, and they come in to see if they cannot add us to their customers.

Q. Without asking you how often these weakening tendencies may occur, tell us about how often, on an average, they wait on you each year, how many times?

A. I should say in these later days not more than four or five times a year, maybe.

Q. Have their quotations been the same as the American Steel & Wire Company, or different, ordinarily?

A. Well, considering the fact that we do not come together to make prices, it is astonishing how uniform prices are sometimes; but there is a little difference, a trifling difference sometimes, owing to the fact, possibly, that a man has not got many orders, you know, and he wants to get some orders that time, and we get an occasional lower price.

Q. What difference in the quotations has there been?

A. The difference would not be more than a dollar a ton at a time.

Q. How much would that be a keg?

A. That would be five cents a keg.

Q. Is not that a very considerable difference in nails?

A. Yes; there have been—I will qualify that—there have been times when there has been 50 cents difference. Five cents difference is a big difference in a keg of nails.

Q. A good many comptitors sell on a profit of five cents a keg?

A. Exactly so.

Q. This has been so for years?

A. It has been so for years.

Q. That would be the whole profit on a keg?

A. The whole profit on a keg.

Q. That variation ran from five cents down to what?

A. Well, I never knew of any difference that was less than two and a half to five cents.

Q. Answer this question: Generally—not always, of course, but generally—have the quotations that have come to you from these competitors been lower than those of the American Steel & Wire Company? Have they as a general thing been lower?

A. Not the written quotations.

Q. Take the personal solicitations.

A. Yes, the personal solicitations have been a trifle off.

Q. What do you do, if anything, on that account? You do not buy from them?

A. No, we would try to find out if the persons had the goods, and knew what they were talking about, and so forth, and then the next thing we would do was to give that information to our source of supply, and tell them that we were quoted 50 cents or a dollar less a ton, and then it would be up to them.

Q. What did they do about it?

A. They would endeavor to verify that. We would not hear from them for some few days, possibly, but as we are very careful in making statements of that kind, they generally verified the thing all right and said that they would take care of us, which meant that they would meet this price, and we would not have to go outside.

Q. They would always meet a bona fide offer?

A. Yes, they would always meet a bona fide offer, provided they satisfied themselves it was bona fide.

Q. What do you mean by saying you tried to find out whether a concern had the goods?

A. I remember that we have bought carloads of nails and needed them badly, but did not get them. This was some time ago—this is just disgressing a little bit—not in recent times, and we had to go to our source of supply that we could rely on and get the goods, and we got those nails before the nails that we bought at a cheaper price came to hand.

Q. You mean you verified the bona fides of the offer?

A. That is it.

Q. Why did you do that before telling the Steel & Wire Company what it was; why did you?

A. I did not make myself plain there, I guess. I do not mean to say that we did this since our arrangements have been so satisfactory, but previous to that, previous to we will say nine years ago.

Q. Then I misunderstood you. I thought you were speaking of a period within the nine years. Now, have you or not gotten quotations within the nine or ten years?

A. Yes, we have gotten lots of them. We——

Q. Do you get quotations——

MR. DICKINSON: (Interposing) He had not finished, I think. You interrupted him.

MR. LINDABURY: He interrupted my question; he answered before I had finished it. I had the floor.

By MR. LINDABURY:

Q. (Continuing) Did you get quotations during the last nine or ten years, when you have been buying exclusively from the American Steel & Wire Company from other concerns at a different price?

A. Oh, yes.

Q. And have you mentioned those quotations, after verifying them, to the American Steel & Wire Company, and have they met them?

A. Exactly.

Q. Then I did not misunderstand you?

A. No.

MR. LINDABURY: Now, Judge, you thought there was something he was going to say.

MR. DICKINSON: He started to say something.

MR. LINDABURY: You can bring it out probably. He interrupted my question, because he thought I was through, I suppose.

By MR. LINDABURY:

Q. Now, has that occurred every year during this period that you have been buying exclusively from the American Steel & Wire Company? That is at some time or other you have gotten a better quotation from some competitor and upon finding out that it was bona fide you reported it to the American Steel & Wire Company and had it met by them?

MR. DICKINSON: Now, there is just the point I think he was going to correct.

By MR. LINDABURY:

Q. (Continuing) That is the case, is it?

A. Yes.

MR. LINDABURY: Take the witness.

CROSS EXAMINATION.

By MR. DICKINSON:

Q. Mr. Maharg, you are in a very friendly and close relation with the American Steel & Wire Company?

A. Yes.

Q. When other people came there to get your business in this particular line, certainly for a period of nine or ten years, you would report to them the offer of lower bids and what the bids were?

A. Yes, sir.

Q. Then they would investigate that, and if they found out that it was a person that was capable of really furnishing it at that price, then they would meet that price?

A. That is it, sir.

Q. I suppose your relations with the American Steel & Wire Company on the question of nails from the fact that you

have been a constant purchaser from them is pretty well known to the trade, isn't it?

A. I think so, yes, sir.

Q. The others have found out that it was not much use soliciting your business?

A. That is right.

Q. So you say in recent years you have not had many propositions and have not solicited any?

A. We have not solicited any, and I am a little astonished at the solicitation we have received under the circumstances that you state.

Q. In view of the well-known fact of your close relations with the American Steel & Wire Company. Before the formation of the American Steel & Wire Company I believe you said you purchased from the H. P. Nail Company? That was one of them?

A. Yes; we did not carry much; we carried package nails in addition to keg nails, my recollection is. Most of our purchases there were package goods.

Q. And from the Salem Company?

A. Salem Nail Company, Salem, Ohio.

Q. And Newcastle?

A. Newcastle, yes, sir.

Q. All of those were taken over by the Steel Corporation, were they not?

A. Jones & Laughlin.

Q. I know; I am coming to that later. All those three were were taken over by the Steel Corporation?

A. I do not know whether the last one was or not.

Q. The other two were, you know?

A. Yes, sir.

Q. And you also mentioned Jones & Laughlin?

A. Yes, sir.

Q. Any other?

A. Does this mean before the formation?

Q. Yes.

people at Pittsburgh.

A. Oh, yes, sir; we bought lots of nails from the Oliver

Q. They went in, didn't they, to the American Steel & Wire Company?

A. Yes; I believe they did.

Q. Who else did you buy from?

A. We bought nails from a local maker of nails, Philips & Townsend, in Philadelphia.

Q. Those that you have mentioned which went into the American Steel & Wire Company, competed for your business before the formation of the American Steel & Wire Company?

A. Yes.

MR. DICKINSON: That is all.

WILLIAM G. MOLER

was called as a witness on behalf of the defendants, and being first duly sworn, testified as follows:

DIRECT EXAMINATION.

By MR. REED:

Q. Where do you live, Mr. Moler?

A. New York.

Q. What is your occupation at the present time?

A. I am a civil engineer.

Q. Are you in the steel business at the present time?

A. No, sir.

(Whereupon an adjournment was taken until tomorrow, Tuesday, October 28, 1913, at 10:30 o'clock a. m.)

ONE HUNDRED AND FOURTH DAY.

EMPIRE BUILDING,
71 Broadway, New York City.

Tuesday, October 28, 1913.

Before Special Examiner JOHN ARTHUR BROWN.

Present on behalf of the United States, MR. DICKINSON and MR. COLTON.

Present on behalf of the defendants, MR. LINDABURY, MR. SEVERANCE, MR. BOLLING and MR. REED.

WILLIAM G. MOLER,

the witness under examination at the taking of the adjournment, resumed the stand.

DIRECT EXAMINATION (Continued)

By MR. REED:

Q. Did you ever have any connection, Mr. Moler, with the Corrugated Bar Company?

A. Yes, sir.

Q. What is the business of that company?

A. The making of reinforcing bars for concrete.

Q. And about when did that company commence active operations?

A. You mean in the line of reinforcing bars?

Q. That is what I mean. About what year did it begin to sell reinforcing bars, actively?

A. I should judge about 12 or 15 years ago.

Q. Did you at any time have anything to do with the sales of its products in this vicinity?

A. Yes, sir.

Q. What was your title then?

A. Manager of the eastern division of the United States.

Q. What district was included in the eastern division, Mr. Moler?

A. Practically everything east of Pittsburgh.

Q. And when were you manager of that division? During what years?

A. I might say it was five and a half years ago; approximately five and a half years ago.

Q. That is to say, it began about the spring of 1908 or the summer of 1908?

A. Yes, sir.

Q. And when did you relinquish that position?

A. A year and a half ago.

Q. That is, the spring of 1912?

A. Yes, sir.

Q. That company, I understand, was one of the pioneers in this trade?

A. Practically speaking, it was the pioneer.

Q. Did it roll its own bars?

A. No, sir.

Q. Did it roll any of its own bars?

A. No, sir.

Q. When you became manager of the eastern division, what companies were rolling the bars for the Corrugated Bar Company?

A. The Carnegie Steel Company, the Atlanta Steel Company, the Colorado Fuel & Iron Works, the Inland Steel Company of Chicago, the Pacific Coast Steel Mills.

Q. Where are they located?

A. San Francisco. In this country, you are speaking of?

Q. In this country, yes; I am limiting you to that, of course.

A. I failed to mention one.

Q. Will you give us that?

A. The Lackawanna Steel Company. They began just about the time I took my position.

Q. Did this Corrugated Bar Company put out bars of different designs, or did it use one design exclusively?

A. Our patents—I say "our"; I am not with them any more—our patents covered then every feature we could think of to protect the advantages of our invention. We had sev-

eral types, but we limited ourselves to a bar with a cross rib, in order to simplify the production.

Q. Practically, then, your output was confined to one type of bar?

A. Yes.

Q. Although the patents may have gone beyond that?

A. Yes, sir.

Q. And this bar with the cross rib is what is known in the steel trade as a "deformed bar," is it not?

A. Yes.

Q. And that deformity, if I understand the business, is put on the bar at the time of rolling?

A. Yes.

Q. The rolls themselves having these transverse grooves which make the deformity?

A. Yes, sir.

Q. So that no treatment is necessary after the rolling of the bar?

A. That is right.

Q. Were there other types of deformed bars used for concrete reinforcement in 1908?

A. Yes, sir.

Q. Were they made under patents or not?

A. Both; both under patents and not.

Q. Speaking first of the bars that were made under patents, Mr. Moler, what kinds of bars were there?

A. There were bars so close to ours that we thought they were infringements; there were bars entirely different, such as the twisted bar, which was deformed after rolling.

Q. The twisted bar is a square bar, is it not?

A. Yes.

Q. Which, after rolling and cooling, is deformed by twisting?

A. Yes.

Q. That is used for concrete reinforcement also, is it?

A. Yes.

Q. Was there or was there not any competition among these several types of deformed and twisted bars?

A. Oh, yes; at that time, at the time I came here.

Q. We are speaking now of the time between 1908 and 1912, when you had intimate personal knowledge of the business?

A. Yes.

Q. Of course I am not asking you about anything you may have got by hearsay before or after that time.

Will you give us the names of some of the bar manufacturers that were, during that time, making deformed or twisted bars for concrete reinforcement?

A. There were a number of mills: The Lackawanna Steel Company itself, whom we soon arranged with to roll our bars; the Buffalo Steel Company——

Q. You did not give Carnegie's name.

A. I am giving it now. The Carnegie Steel Company rolled; also the Jones & Laughlin plant, and I am not sure, but I think the Pennsylvania Steel Company rolled.

Q. Did the Republic make any?

A. You refer to this whole period of my connection?

Q. Yes. That is the period between 1908 and 1912?

A. Yes. I would mention others, if you are referring to the whole period; there were others.

Q. Did the Republic start after 1908 and make them?

A. Yes.

Q. When did they begin?

A. They rolled some for us beginning, I think, about three years ago. They rolled for other people also, the twisted bars.

Q. Prior to that time had they been making either deformed or twisted bars, before they started to roll that type of bar?

A. I am not sure, but I think they did; I think they did roll twisted bars.

Q. How about the Inland Steel? I infer from what you told us before that they were doing it?

A. Yes.

Q. And the Colorado Fuel & Iron?

A. Yes.

Q. Was the Franklin Company making bars, either deformed or twisted?

A. Yes. I might say here in addition, in order to be full and clear, that there were several other companies that went into the deformed bar business during the time of my position here.

Q. During this period from 1908 to 1912 was there any competition among these different makers of concrete reinforcing bars?

A. Yes.

Q. And the character of that competition, Mr. Moler, as to whether or not it was aggressive?

A. Oh, it was exceedingly aggressive.

Q. In what ways was that competition displayed?

A. In the usual manner, to get business that was being let to other bar companies, deformed bar companies, for the purpose of reinforcing concrete, by giving the most favorable prices, terms of delivery and quality of steel and the shape of the deformity.

Q. It was not only a question of quality of the steel used, I infer, but also the nature of the design of the deformity or distortion?

A. Yes.

Q. Were you as manager of the eastern division of the Corrugated Bar Company in a position to know all about that competition?

A. The competition between the bar companies or between the mills?

Q. Competition in the sale of those bars to the consumer?

A. Yes, that was my business.

Q. You had charge of the sales, had you?

A. Yes.

Q. Was there any pool or agreement by which prices were upheld?

MR. COLTON: I object to that on the ground that the witness is not shown to be in a position to know as to whether there were pools or agreements or understandings between the manufacturers.

MR. REED: Will you answer the question?

THE WITNESS: Do you want me to answer his question?

MR. REED: His remarks were an objection to the question,

to which I ask you to pay no attention at all. Please answer my question.

THE WITNESS: Between the bar companies?

By MR. REED:

Q. I mean between the people who were selling the bars to the consumers?

A. I think I can say there was not.

Q. You think you would have known of it if there had been?

A. I most certainly would.

Q. During the whole of that period was there competition in the prices quoted to consumers of those bars?

A. Yes.

Q. Your company in a sense was a middleman in this business, was it not?

A. Yes.

Q. And did you compete with other middlemen?

A. Yes.

Q. Patentees like yourselves?

A. Yes.

Q. And were you also in competion with the bar mills?

A. Yes.

Q. And were prices quoted closely on those products?

A. Yes.

Q. And was that so during all this period when you have this personal familiarity with the business?

A. Yes.

Q. Did you have knowledge of prices that were quoted by your competitors, both of the patentee class and of the mill class?

A. Yes.

Q. Could you at any time beat the mill prices?

A. Yes.

Q. And at times I suppose the mills beat your prices?

A. Yes.

Q. You have been out of this bar business altogether during the last year and a half, have you not?

A. Yes.

MR. REED: You may cross examine.

CROSS EXAMINATION

By Mr. Colton:

Q. Mr. Moler, you came here to this country in the summer of 1908?

A. The spring.

Q. You had sufficient familiarity with market conditions to notice a decided break in prices during 1909 in the price of bars, did you not?

A. To the best of my recollection there was a break.

Q. About how extensive was that break?

A. I should say it affected the tonnage price $5 a ton.

Q. $5 or $6?

A. That is the maximum variation.

Q. Might it not have been as much as $6 a ton, that variation?

A. I do not recall that we got quite that far.

Q. So far as your personal experience extends, it shows the break was about $5?

A. I think between the minimum and maximum—I think there was safely an extreme of $5 a ton.

Q. Are you sufficiently familiar with the deformed bar market to know of a break that occurred in 1911 of about the same amount per ton?

A. I should be able to say, but I have not consulted my papers, nor have I access to them any more on that subject. You say 1911?

Q. Yes.

A. Yes, there was a reduced price; I do not recall that it went as far——

Q. As it did in 1909?

A. That is, I mean where you could consider it as a prevailing low price. I do not think it reached the low price of the previous period you speak of, but there were breaks. It went pretty low, but they were not prevailing prices.

Q. That is, during that period the price was at various points before it reached the minimum of which you speak, of $5 a ton less than it had been previously?

A. Yes, sir.

Q. You spoke about the fact that if there had been pools or understandings among the various manufacturers, you think you would have known of it?

A. Yes.

Q. Were you invited to attend any of the bar committee meetings?

A. No, sir.

Q. Appointed by Judge Gary and presided over by Mr. Willis King and others?

A. No, sir.

Q. If there were such meetings as that, you do not know anything about what was done at those meetings, do you?

A. No, sir.

Q. And you are only speaking of your personal knowledge?

A. Yes, sir.

RE-DIRECT EXAMINATION

By Mr. Reed:

Q. There is one question I wanted to ask you. Did your company, during this period from 1908 to 1912, sell some bars in foreign countries?

A. Yes, sir.

Q. And what company did you usually get to roll those bars for foreign sales?

A. We dealt with the United States Steel Products Company.

Q. Why did you deal with that company in preference to other steel concerns in this country?

A. We were given better service. Their business was foreign business, and in making shipments to foreign countries they were usually on guarantees for deliveries that were at least urgent, and it was incumbent on us to take the best means of keeping our foreign customers supplied at the time they wanted them. Due to the fact that ships sometimes left only every thirty days, we could depend better on the service of the United States Steel Products Company than on any other concern. Then they were acquainted with foreign conditions and did not take chances in careless filling of orders.

In this country a concern sometimes takes some risk on filling orders, which when material goes abroad, they would not be justified in taking. This company was experienced and gave us no trouble whatever, so I did the purchasing myself on those orders and shipped the material through the United States Steel Products Company.

Q. That company had developed a foreign business?

A. Yes, sir.

Q. Which made it easy for you to meet your requirements?

A. Yes, sir.

RE-CROSS EXAMINATION

By Mr. Colton:

Q. Did not that company, that is, the export company, or the Steel Corporation, give you the same reduction in price because of the fact that you were going to export those goods that it frequently gave to others that purchased the steel products?

A. I am not able to say definitely on that point. I presume they did. They gave us prices which were in competition, as a rule, with foreign conditions.

Q. And lower than the prices here?

A. Lower than the local prices?

Q. Yes.

A. I do not recall that as a rule, but the practice was to meet foreign competition. We had competition from abroad on material which at times was lower than the market price here, and sometimes about the same, and higher.

Q. When you were going to ship abroad did you ever pay the export company a higher price?

A. No. The foreign prices were not higher; sometimes they were lower, sometimes about the same.

Q. Then you mean you got the same prices when you were shipping abroad, or a lower price?

A. That is the price as compared with the United States market, but the United States Steel Products Company was always able to give us a price which met the foreign competition regardless of what the local market was.

Q. I understand, but as I understand it, you, in order to meet foreign competition, got at times from the export company a lower price than prevailed in this country?

A. Yes, sir.

Q. But you did not at any time get from them a higher price because you were going to export, did you?

A. No, sir.

(Whereupon a recess was taken until 2 o'clock p. m.)

AFTER RECESS.

GEORGE M. WRIGHT

was called as a witness on behalf of the defendants, and being first duly sworn, testified as follows:

DIRECT EXAMINATION

By Mr. Reed:

Q. Where do you live, Mr. Wright?

A. Worcester, Massachusetts.

Q. What is your occupation?

A. Manufacturer of wire and wire products.

Q. I think you are Mayor of Worcester, too, are you not?

A. I am Mayor of Worcester at the present time.

Q. You are president of the Wright Wire Company, are you not?

A. Yes, sir.

Q. And have been since when?

A. Ten or eleven years; eleven years, I think.

Q. You started, then, as president in 1902?

A. Yes, sir.

Q. And had you held any other office in that company before that time?

A. I have held the office of general manager for 28 years.

Q. That is, since about 1885 or 1886?

A. 1885.

Q. When was the Wright Wire Company founded?

A. At that time, in 1885; although we had done a little business under another name and with other part owners, before that, for two or three years.

Q. Can you tell us, Mr. Wright, whether your business has increased since you became president in 1902?

A. It has. It is about four times as large as it was at that time.

Q. At the present time it is four times as large as it was in 1902?

A. Yes.

Q. What does that company manufacture principally?

A. We manufacture galvanized poultry netting, wire cloth of all kinds, steel, brass and copper; wire rope and cable; and then many other little lines, like wire picture cords, ornamental wire fence goods, elevator cabs and enclosures, and so forth.

Q. How long has your company been making poultry netting?

A. We were the third to engage in the business; 28 years ago—about 29 years ago.

Q. How long have you been making wire rope?

A. About 11 years, I should think.

Q. How long have you been making wire cloth?

A. Since we began business; 28 or 29 years ago.

Q. You started, then, on poultry netting and wire cloth principally?

A. My father's business was with the Clinton Wire Cloth Company at Clinton. They were the original wire cloth weavers in this country, beginning their business about 50 years ago; so that was practically what our business was when we started away from there—wire cloth. Poultry netting was just beginning to come in then, and we were the third to engage in that business in this country.

Q. Let us take poultry netting first. How many manufacturers of poultry netting are there to-day in the United States?

A. Seven.

Q. Will you name them?

A. I think perhaps there is another concern on the coast that makes a little; but they do not cut much ice.

Q. On which coast?

A. On the Pacific coast.

Q. Will you name the seven eastern mills.

A. The seven eastern mills are:

The American Steel & Wire Company; I think their plant is in Joliet; Wickwire Brothers, Cortland, New York; the New Jersey Wire Cloth Company, which is a department of the Roebling Company, of Trenton, New Jersey; the Ludlow & Saylor Wire Company, of St. Louis; the Gilbert & Bennett Manufacturing Company, of Georgetown, Connecticut, and Wireton, Illinois, I believe it is, right out of Chicago; they have two plants; and the Clinton Wire Cloth Company at Clinton, Massachusetts; and the Wright Wire Company at Worcester and Palmer, Massachusetts.

Q. You have a factory at Palmer, Massachusetts, as well as at Worcester?

A. Yes.

Q. Approximately, Mr. Wright, what is the aggregate tonnage of this country's output of poultry netting?

A. Speaking of hexagonal mesh poultry netting?

Q. The usual kind, I mean.

A. The usual kind; of course this is only my own estimate, but I think about two million rolls, or 40,000 tons.

Q. And what part of that output does your company make?

A. Why, I should judge about one-sixth.

Q. A trifle over its proportionate share?

A. Yes, sir.

Q. What part of it does the American Steel & Wire Company make, approximately?

A. I have not any means of knowing, but I should judge somewhere near the same amount.

Q. You are in competition with them, are you not?

A. Yes, sir. You find their goods everywhere except in New England. You do not find many there.

Q. You have a general knowledge of their business?

A. Yes, sir.

Q. And are the other manufacturers of poultry netting of about the same size as yourselves?

A. Two or three of them are; one or two, I should say, are a little smaller.

Q. How many of these seven manufacturers were there in 1899?

A. I think all of them, except the Ludlow & Saylor Wire Company of St. Louis.

Q. How many were there in 1901?

A. I think Ludlow & Saylor went in about that time. I am not quite sure about that.

Q. It started about 1901, did it?

A. Yes. There was another manufacturer making a very small amount, the Tyler Wire Works, of Cleveland, Ohio; but they were only in three or four years, and dropped out.

Q. How many plants has the American Steel & Wire Company that manufacture this poultry netting?

A. Only one that I know of.

Q. What was the name of that plant before the Steel & Wire Company bought it?

A. The name of the company that they bought out was the McMullen Wire Fence Company. They were located in Chicago prior to the time the American bought.

Q. How many plants had that McMullen Company?

A. Only one that I know of.

Q. Was there any other manufacturer of poultry netting acquired by the American Steel & Wire Company besides this McMullen plant?

A. I do not know of any.

Q. You were in the business at that time?

A. There were no others.

Q. Is there any competition in this business of the manufacture and sale of poultry netting?

A. There certainly is.

Q. Are there any pools or agreements fixing the price?

A. There are not.

Q. Have there been since 1899?

A. No, sir.

Q. Has there been any of this competition in this business since that time?

A. All the time.

Q. What kind of competition has there been, Mr. Wright?

A. It has been competition that has kept us down to a pretty small profit; smaller than on anything else we have in our lines.

Q. I suppose that the location of these plants determines to some extent the territory in which they sell their products, does it?

A. Perhaps a little.

Q. The western plants do not get into New England much, do they?

A. They do not, because they always have made, up to a year or two, what they call a "galvanized before weaving" product, and they do not get into New England at all; they will not buy it, so they have not sold very much in New England.

Q. When do you galvanize your product?

A. We make both grades; the "galvanized before" was originated by the McMullen people. We had to make that to compete and get our share of the western business.

Q. Now, coming to wire rope, were you a member of any wire rope pool in 1909?

A. No, sir.

Q. Were you a member of a wire rope pool in any other year?

A. No, sir.

Q. Have you ever fixed the price of wire rope by agreement with any other manufacturers?

A. No, sir.

Q. Do you sell your product in competition with other manufacturers?

A. We do.

Q. Do you draw your own wire, Mr. Wright?

A. Most of it.

Q. Your raw material, then, is purchased in the form of wire rods, is it?

A. Yes.

Q. About what tonnage of wire rods do you buy each year?

A. Of American rods we buy from 10,000 to 12,000 tons.

Q. About what tonnage do you import?

A. Very small; perhaps 200 or 300 tons a year.

Q. Is that the same quality as the American?

A. No.

Q. For what reason do you import it?

A. It is Swedish stock, very much nicer grade than we can get here, because it is made from Swedish ore.

Q. But the bulk of your purchases is of domestic manufacture?

A. Yes.

Q. How long have you been buying wire rods in the market?

A. Twenty-one years.

Q. Do you remember how prices ranged in the beginning of the year 1900? Were they high or low?

A. If I remember right, that is the year that the market dropped out in April, and our friend Mr. Gates rather punctured the market with a drop of about $20 a ton on wire nails and other wire products in one day. That was in April of that year.

Q. Since that time, then, say May or April in the year 1900, have you been buying wire rods regularly?

A. We have.

Q. Have your purchases been made on a competitive basis or otherwise?

A. Competitive basis.

Q. When you are about to place an order for wire rods, do you send out inquiries to the different manufacturers for quotations?

A. Yes.

Q. Will you tell us some of the manufacturers of wire rods that you have asked for quotations in that way?

A. Practically all of them; the American Steel & Wire Company; the Youngstown Sheet & Tube Works; the Cambria Steel Company of Johnstown; the Pittsburgh Steel Company

of Monessen; the Washburn Wire Company of Providence or Phillipsdale, Rhode Island; the Ashland Steel Company of Ashland, Kentucky, I think it is; and Wickwire Brothers of Cortland, New York.

Q. How about Roebling?

A. The Roebling Company of Trenton, New Jersey.

Q. How about Jones & Laughlin?

A. We have asked them for prices, and we have bought some from them.

Q. Do the quotations that you receive from different manufacturers, in response to a particular inquiry, vary in price, or are they uniform in price?

A. They always vary.

Q. How long has that been so?

A. It has been so continuously.

Q. Will you state whether or not there is competition for your business among the wire rod makers?

A. There certainly is, yes. We may place an order sometimes for 2,000 or 3,000 tons with one concern which happened to be the lowest at that time, and perhaps a month or two later we buy another lot of 1,000 or 2,000 tons from another concern at a lower price.

Q. How long has that been going on?

A. For many years.

Q. About what percentage of your purchases of wire rods have you made from the American Steel & Wire Company in recent years?

MR. DICKINSON: Will you define what you mean by "recent years"?

MR. REED: Eight years.

THE WITNESS: I should judge not over ten per cent.; perhaps not over five; it varies; some years more than others.

By MR. REED:

Q. Have you observed any evidence of a combination or agreement to fix a price among the different manufacturers of wire rods from whom you have been buying since May, 1900?

MR. DICKINSON: That is objected to as incompetent, and because it calls for an opinion of the witness, and an opinion based on a state of facts which rests in the mind of the witness and not disclosed to the court.

THE WITNESS: No, I have not.

Q. Have the different manufacturers appeared to be very anxious for your business?

A. They have.

Q. Have they solicited your business in any way?

A. They have.

Q. And by what methods?

A. Well, they have salesmen come to our office quite frequently, but wire rods we have usually bought by going to their place; most of them have been represented either in New York or Pittsburgh. I have bought most of the rods myself up to within two years.

Q. You know competition when you see it, I suppose?

MR. DICKINSON: That is objected to because the time is not defined, and it does not show that the witness knows.

THE WITNESS: I ought to.

By MR. REED:

Q. In your opinion has there been active, aggressive competition among manufacturers of wire rods in the last twelve or thirteen years?

MR. DICKINSON: Objected to because it calls for a mere conclusion of the witness upon an unshown state of facts.

THE WITNESS: Certainly; there has been evidence of competition continually during that time.

By MR. REED:

Q. Do you buy any plain wire, Mr. Wright?

A. We do.

Q. About what tonnage annually?

A. For the last three years about 2,000 tons, I should say, or 2,500.

Q. Do you buy that in the same way as you buy wire rods?

A. Yes.

Q. Why do you buy plain wire if you have appliances for drawing wire yourself?

A. Because our finishing department has continually kept ahead of our wire drawing department, and we are behind about 2,000 tons in output.

Q. Have you asked quotations on plain wire in the same way that you have on wire rods?

A. We have.

Q. And have the quotations that you have obtained from the manufacturers of plain wire varied in the same way?

A. They have.

Q. How long has that been so?

A. It has always been so.

MR. DICKINSON: I understood you to say in the last three years you bought about 2,000 tons. Did you say what you bought before that?

THE WITNESS: We bought some wire practically every year, but not quite so much as that all the time. Some years previous 1,000 tons, maybe, but in the last three years it has run up to 2,000 or 2,500.

By MR. REED:

Q. Are you fairly familiar with the different manufacturers of wire rods in the country?

A. Yes, I think so.

Q. It appears from certain proofs in this case that in the year 1901 the United States Steel Corporation manufactured 1,059,859 tons of wire rods, while other manufacturers manufactured 306,075 tons, and that in the year 1911 the United States Steel Corporation's subsidiary companies manufactured 1,586,594 tons, while other manufacturers made 863,859 tons; or in terms of percentage that in 1901 the Steel Corporation made 77.6 per cent. of the wire rods of the country, and in 1911 made 64.7 per cent. of the wire rods of the country. Now I wish you would state to us whether these tonnages and percentages represent the proportion of wire rods manufactured for sale by these respective producers?

MR. DICKINSON: What are you reading from, Mr. Reed. You speak of evidence in the case.

MR. REED: Exhibits 69 and 70, Volume 3, of our Exhibits, pages 313 and 314.

MR. DICKINSON: Defendants' Exhibits?

MR. REED: Yes. I might say to you, Judge Dickinson, that these figures are in tables produced by Mr. Filbert taken by him from Swank's reports, and they agree exactly with the figures Mr. Colton proved in other tables.

MR. COLTON: For different years.

MR. DICKINSON: This is objected to because it has not been shown that the witness knows the particular kinds and classes of wire rods that were covered by the proof that has been referred to in the case, or that he is familiar with or has knowledge of the proof, or that he has access to the books of the American Steel & Wire Company.

THE WITNESS: I do not think they do for this reason: I assume that the Steel Company's increase there, of something like 45 or 50 per cent, roughly figured in my head, was quite largely taken up by their finishing departments. I have heard them tell me when I was buying wire a good many times——

MR. DICKINSON: We object to his repeating what anybody told him as being hearsay.

MR. REED: That is only for the purpose of the record. You may continue.

THE WITNESS: That their policy was to use as large an amount of their raw material as they possibly could, putting it through their finishing mills. That is exactly the policy of our company. We buy rods and make wire, and aim to make that wire into other products; so that when that is sold it is a product made of wire rather than wire itself. Well, these other companies, as I have observed them, sprung up from time to time, and most of them have sprung up since we have been buying rods; they started out with a unit of a rod mill, which had a capacity of perhaps 100 or 150 or 200 tons a day, the smallest unit they could put in to begin with, and for some years they are forced to sell rods until they get nail factories and fence factories, and one thing and another established to take up their rods, so that I believe the proportion of rods offered for actual sale on the market has been much larger with the independent companies than

the Steel Company during the past five or six or seven or eight years, perhaps, during which time these independent companies have built and equipped their mills also. Does that answer the question?

MR. REED: Yes.

MR. DICKINSON: The answer is objected to because it is based partly upon hearsay, partly on some belief expressed by the witness without showing the facts upon which that belief rests, and upon a further assumption of knowledge of the detailed business of the American Steel & Wire Company, and the witness has not disclosed any knowledge that would make him qualified to answer any such question or give any statement in regard to that business.

By MR. REED:

Q. In the course of your personal acquaintance with this wire rod business, Mr. Wright, which have you observed had the largest tonnage of rods for sale, the Steel Corporation or the manufacturers unconnected with the Steel Corporation?

A. That has varied a good deal. At the beginning of the period, say, in 1900 to 1903 or 1904, I should say that the Steel Corporation had the more rods to sell, but during the past few years they have not been so aggressive in trying to sell rods to us, at least, as some of the other companies have been, although we bought from them almost every year some portion.

Q. You testified, I think, that you had bought somewhere between five and ten per cent. of your requirements from them?

A. Yes.

CROSS EXAMINATION.

By MR. DICKINSON:

Q. Take the year 1900: Do you know what proportion of the rods of the American Steel & Wire Company they used and what proportion they sold on the market or offered for sale on the market?

A. No; I do not.

Q. Have you had access to their books?

A. No, sir.

Q. Have you had any detailed information or intimate knowledge of their private affairs so far as their sales are concerned?

A. No, sir.

Q. Take the year 1901: Do you know what proportion of their rods they used and what proportion they sold in the market?

A. I do not.

Q. Do you know how many they made that year?

A. I did know at the time, I think. I could not say.

Q. You do not know now?

A. No.

Q. Take the other concerns, the so-called independents, who in the year 1901 were selling in the market: Do you know that they sold all of their output of rods, or that some of them manufactured some?

A. I think they manufactured some of them.

Q. Do you know what percentage they manufactured?

A. No, sir; I do not.

Q. Can you give any approximate estimate of it as to any of them?

A. No, sir.

Q. Take the year 1902: Do you know what percentage of the rods of the American Steel & Wire Company was sold and what percentage was used?

A. No, sir.

Q. Did you have any knowledge of their books for that year, or their sales?

A. No, sir.

Q. Or of any of these other companies?

A. No, sir.

Q. How would it be for 1903, 1904, 1905 and 1906? Have you any intimate knowledge of the affairs of any of those companies as to their sales, and what they manufactured and what they sold, or the percentages?

A. No, sir.

Q. Of what year, if any, covering the period of which you have spoken, have you such intimate knowledge that it would

enable you to give any approximately correct estimate of percentages?

A. I have not any intimate knowledge. I do not know as I have made any approximately correct estimate.

Q. Have you any knowledge upon which you can state that you know anything about the percentages sold or manufactured by these various companies?

A. No, sir; only just an estimate that I might make.

Q. Is that just a guess?

A. It is a guess; that is all.

Q. Before the formation of the American Steel & Wire Company state what companies you purchased rods from.

A. The Washburn & Moen Manufacturing Company and the Pittsburgh Steel & Wire Company.

MR. COLTON: That was an Oliver concern, I think?

THE WITNESS: No, it was managed by James Farrell.

By MR. DICKINSON:

Q. Any others?

A. I think we bought some from the Consolidated Steel & Wire Company. I do not know just where they were located now.

Q. Any others?

A. Rankin, Pennsylvania, I think it was; somewhere out there, or Braddock; one of those places.

Q. The Consolidated, you mean?

A. Yes; out that way somewhere, I think.

Q. Now, you have named the Washburn & Moen and the Pittsburgh and the Consolidated. Can you name any others?

A. I do not think there were any others.

Q. Those were competitors for your business, were they?

A. Yes, sir.

Q. Did they quote varying prices to you?

A. Yes.

Q. And aggressively seek your business?

A. Yes.

Q. All of them went into the American Steel & Wire Company, did they not?

A. I think so.

Q. How long since you did the buying of your company and kept in active touch with the question of buying in any of these products of which you have spoken?

A. A little over a year; a year and a half, perhaps.

Q. You have had no familiarity with prices within that time?

A. Oh, yes, I have. I have known every contract that was made for rods, but I have not worked the thing up or made the deal directly myself.

Q. You have known the prices, then?

A. I have known the prices.

Q. Even during that period?

A. Yes, sir.

Q. And when were you the active purchaser? During what period?

A. All the time up to about a year and a half ago.

Q. Did you make your purchases in wire rods and plain wire under contracts, or as your needs required from time to time?

A. We got prices from time to time and made contracts for definite quantities.

Q. When you made contracts, for what length of periods would these contracts run?

A. Anywhere from three or four months to eight or nine months.

Q. Take the year 1901: Did you have a contract for that year?

A. I think I did.

Q. With what company?

A. Probably with the American Steel & Wire Company.

Q. For your entire consumption?

A. I could not say as to that.

Q. Can you recollect any other?

A. We were buying, at the time the American Steel & Wire Company bought out the Pittsburgh Steel & Wire Company, a little from them at that time. We had a contract with them.

Q. You were buying from the Pittsburgh Steel Company?

A. Yes.

MR. REED: You mean the Pittsburgh Wire Company, do you not?

THE WITNESS: Yes, the Pittsburgh Wire Company, at Braddock.

By MR. DICKINSON:

Q. And so that contract ran over for some time? How long?

A. I could not say as to that, but I know we were buying rods from them right along for several years, and also from the American Steel.

Q. What American Steel?

A. The American Steel & Wire Company.

Q. Take the year 1902: From whom did you buy?

A. The American Steel & Wire Company. I do not know who else. We bought some rods from a concern here in Long Island. They made 1,000 tons for us, I think.

Q. In that year?

A. I could not say. It was about that year, I should say.

Q. The only one you can distinctly remember is the American Steel & Wire Company for that year?

A. We bought a good many from them right along there, I know.

Q. I am asking if you remember any other that you bought from in 1902. State what company it was, if you remember.

A. I could not say definitely about that.

Q. How about 1903? From whom did you buy?

A. I should judge we were buying from Wickwire Brothers at that time, some.

Q. Do you remember that you bought that year from them?

A. I am not sure, but I think so.

Q. Did you buy any that year from the American Steel & Wire Company?

A. I presume we did. I think we bought both from the American Steel & Wire Company and Wickwire Brothers, about 1903 and 1904. As soon as the mill was ready—I do not know the date exactly—but when their mill was turning out rods, we bought rods from them.

Q. The Wickwire people, you mean?

A. Yes.

Q. You do not know when that was?

A. I cannot tell exactly, but it was ten years ago, I should say.

Q. Ten years ago? That would be about 1903, would it not?

A. 1903 or 1904.

Q. That was the first time you bought from them? What proportion did you get from them, and what proportion from the American Steel & Wire Company?

A. I would not be able to state that. We bought a good many rods from Wickwire Brothers.

Q. Take the year 1905, from whom did you buy?

A. We were dividing up our business all along, all those years.

Q. On what?

A. Wire rods.

Q. Between whom?

A. Between anybody that was in the market on wire rods.

Q. Just state with whom you divided it up in the year 1905?

A. As I say, I am not sure about the date when Wickwire Brothers began rolling rods.

Q. If they were rolling rods you got some from them?

A. We got some from them, probably.

Q. You got some from the American Steel & Wire Company?

A. Yes. I think there is no doubt that we were buying rods from the American Steel & Wire Company all the time.

Q. Do you know what proportion you bought from Wickwire and what proportion you bought from the American Steel & Wire Company during that year? I mean, do you remember?

A. No, I do not.

Q. Take the year 1906, from whom did you buy?

A. I should judge we began to buy from the Morgan Spring Company of Worcester, who had a plant at Struthers, Ohio, which is now the Youngstown Sheet & Tube Company plant.

Q. When did you begin to buy from them?

A. I cannot say definitely; I should say about 1906 or 1907.

Q. That is as near as you can come to it?

A. That is as near as I can come to it.

Q. Take the year 1907, assuming that they were in business then and that Wickwire was in business then, from whom did you buy that year?

A. I am pretty sure we were buying from all three.

Q. Do you know in what proportions?

A. No; I cannot give you that.

Q. Can you give it approximately?

A. We were able to buy it some seasons cheaper from one concern than the other, and *vice versa.*

Q. And you do not know whether you got all that year from one or two, or whether you divided it up among three, or gave it all to one?

A. The business was divided up between at least two people all the time.

Q. Which two do you mean? The Wickwire and the American Steel & Wire Company?

A. No, two out of the three, or maybe more.

Q. But you cannot name them for the year 1907?

A. No.

Q. And you cannot name them for the year 1908?

A. No.

Q. Nor for the year 1909?

A. I should judge we were using a good many rods about that time, in 1908 and 1909, from Youngstown, and a few from Roebling. Some from Wickwire all the time, some from the American Steel & Wire Company, and possibly we bought some from Cambria; I do not know whether they were running at that time, or Jones & Laughlin, but three or four years ago, I should judge.

Q. How far back do you remember distinctly that you bought from Jones & Laughlin, what is the first year you remember?

A. We never have bought very many from them.

Q. How far back can you recall distinctly that you bought from Roebling, what year?

A. Oh, I couldn't say.

Q. How far back from the Cambria?

A. I should say three or four years.

Q. That is as near as you can come to it, is it?

A. That is as near as I can come to it.

Q. Now, did you have a contract with the Cambria, or did you buy from them occasionally?

A. We had a contract with all of them.

Q. The first contract that you had with the Cambria, over what period did it run, and what was the tonnage, about?

A. I couldn't tell you.

Q. Do you know what the price was?

A. No, sir.

Q. Was it a sliding scale contract?

A. No, sir; a dead open and shut price.

Q. Take the year 1906; do you recall and can you state from what concerns you took bids during that year?

A. I could not do it.

Q. Or the price that they offered?

A. I can approximate the price, but I cannot say whom we bought from.

Q. Do you mean that you can approximate the market price at that time, or that you can remember and recall the price, approximately, offered by each of the companies for that year?

A. No, sir.

Q. You do not mean that.

MR. LINDABURY: No; he said he could approximate the price he paid.

MR. DICKINSON: That is not what I asked him. I never have asked him to approximate the price he paid.

MR. LINDABURY: That is what he said.

By MR. DICKINSON:

Q. Now, I ask him whether he can approximate the bids for any particular year.

MR. REED: And he has answered you twice that he cannot.

THE WITNESS: I cannot.

By Mr. Dickinson:

Q. Take the year 1901; I have asked you about rods. From whom did you purchase plain wire that year?

A. I cannot tell you; we did not buy so much plain wire at that time as we have the last three or four years.

Q. Take some four years ago, how much plain wire did you buy?

A. Well, I should say prior to three years ago we were buying 500 to 800 tons a year.

Q. What would that represent in money value?

A. $40,000 to $50,000.

Q. Take the year back of that; take the year 1907, to be sure it goes back to that period; do you know from whom you purchased during that year?

A. Wire?

Q. Yes.

A. Why, we have been buying wire—if you want to know the names of the concerns that we bought wire from?

Q. Now, I want to know whether you can recollect and say that you purchased wire from them in that year?

A. I cannot recall anything that year.

Q. Or prices, either?

A. Going back into those years is hazy with me. Home I am dealing with figures on paper, but here I am not.

Q. Your recollection is hazy on bidders and contracts and bids?

A. No, sir.

Q. If it is not hazy, tell us what you know about the year 1907.

A. We were probably buying wire from the Pittsburgh Steel Company and the American Steel Company; possibly the Spencer Wire Company and the Morgan Spring Company.

Q. Now, you say probably. Do you know, as a matter of fact, that you bought from them that year?

A. No, sir. I know we buy from all of these people more or less most every year.

Q. But you cannot say which ones you bought from that year?

A. No, sir.

Q. Did you have any long term contracts with any of them that year? If so, state with whom?

A. I do not recall the contracts. We usually made contracts in the fall to last until the next summer.

Q. And you cannot recall a contract that you can state positively now you had with either of those companies that year?

A. No.

Q. Nor the price at which it was awarded?

A. No.

Q. Nor the bidders?

A. No.

Q. Nor the price bid by them respectively?

A. No, sir; it is too far back.

Q. Suppose I ask you the same questions in regard to 1908, what would your answers be?

A. That would be the same thing.

RE-DIRECT EXAMINATION

By Mr. Reed:

Q. You stated in answer to Judge Dickinson that your statement that the American Steel & Wire Company's proportion of rods made for sale was not as large as its proportion of the total rod production of the country was only a guess. Do you mean that that was made without any knowledge of the facts upon which to base it, that it was a guess made without knowledge of any kind?

A. It was made after my observations of the movement of the wire business, and I have been pretty familiar with it and right on the firing line of it for 28 or 30 years.

Q. Won't you tell us, if you please, just what facts you know, rather briefly, which seem to you to justify that assertion which you called a guess?

A. Why, the American Steel & Wire Company has not been so aggressive for the rod business the last five years as they were prior to that time with us, although they have

always sold us rods and made prices, and within four months I have made a contract with them for a quantity of 1,000 or 2,000 tons; so we take them when we can get them, and wherever we can get them cheap; and we have always done that.

Q. Have you any knowledge of the quantity of finished products that the American Steel & Wire Company make out of their wire rods?

A. Only on one or two commodities.

Q. What are those commodities?

A. Poultry netting.

Q. How about wire nails?

A. Of course that knowledge is based on my experience in competing against them with our own products?

Q. That is, in poulty netting?

A. No, poultry netting—I see where their stuff goes, and knowing about what the trade takes, or the trade they sell to; each manufacturer has a pretty definite idea as to what competitors make, although they never tell him how much they make.

Q. As to the manufacturers of wire rods in the year 1898: I think it was that year that you were asked about; you named three that went into the American Steel & Wire Company. Do you know of any others that did not?

A. Well, there was Roebling.

Q. How about the Ashland Company?

A. The Ashland Company.

Q. That started about that time, did it?

A. I should judge it did. I knew at the time—I had quite some correspondence with them just before they started their mill. I could not remember the date.

Q. I am not asking you, of course, to remember particular years.

A. No, I could not.

Q. But for the year 1901 both the Ashland and Roebling had their wire rod mill in operation, did they?

A. I think so; yes.

RE-CROSS EXAMINATION

By Mr. Dickinson:

Q. Mr. Wright, you said you purchased something from the American Steel & Wire Company within the last four months. What was it?

A. Wire rods.

Q. Anything else, this year?

A. Wire.

Q. How much wire rod did you purchase?

A. I think it was 1,000 tons.

Q. What time?

A. July.

Q. What price did you pay for it?

A. They have got a competitor here in the room, and I don't know as I ought to answer that.

Mr. Reed: You say you have a competitor?

The Witness: They have a competitor in the room, from whom we also buy rods.

Mr. Dickinson: Counsel on the other side, then, objects to your answering it?

Mr. Reed: I do not think he ought to.

Mr. Dickinson: I think he should.

The Witness: I do not think I ought to answer that.

Mr. Dickinson: Do you decline to answer it?

The Witness: I won't say that I decline.

Mr. Reed: Would it satisfy you, Judge Dickinson, to have Mr. Wright tell you that privately?

Mr. Dickinson: I don't care whether he tells it or not. I do not waive the question; I put it up to him. If he refuses to answer, all right.

Mr. Reed: Would it satisfy you, since he does not waive the question, to have him give it to you privately?

Mr. Dickinson: No, I want it put on the record.

Mr. Reed: You insist on it being put on the record, do you?

Mr. Dickinson: Yes.

Mr. Reed: Mr. Wright, why is it that you are reluctant to answer this question?

THE WITNESS: It does not seem to me that as a buyer—and I have been a buyer and had the name of being a pretty close buyer—that it is a fair thing on the witness stand, or anywhere else, to state the price that I pay for a commodity in the presence and hearing of a competitor of that company.

MR. DICKINSON: You can send the competitor out if you want to.

MR. REED: And then print the record for distribution all over the United States.

MR. DICKINSON: He has testified about prices and given his opinion of prices and of competition. When a witness comes forward and testifies to matters of that sort——

MR. LINDABURY: Has he testified as to that to-day?

MR. DICKINSON: He has testified covering that period four months ago.

MR. REED: He testified to that in cross examination. I am going to enter an objection now to this question which is pending as not cross examination and as irrelevant and incompetent.

MR. DICKINSON: Do you decline to answer?

THE WITNESS: What is the penalty if I do decline?

MR. DICKINSON: I do not know as anybody here is competent to tell you that. You can take advice of counsel if you want to.

THE WITNESS: I am willing to give you the figure. I do not want the figure to be published broadcast or given to competitors. I will give you the figure privately.

MR. DICKINSON: It doesn't do me any good to get confidential communications. Whatever is of value has got to be put down in the testimony to go before the court.

MR. REED: Would you be willing, Mr. Wright, to state the figure to the stenographer privately?

MR. DICKINSON: I am perfectly willing to consent to that, so that I know it and it gets on the record. Of course, you understand I do not receive it as confidential, however.

(The witness thereupon wrote on a slip of paper and handed to the stenographer the following words:)

"I believe it was $27.50 per gross ton delivered Palmer."

By Mr. Dickinson:

Q. Within what time was that delivery to be made?

A. I think up to January 1st.

Q. Up to January 1, 1914?

A. 1914.

Q. What is the difference between the price delivered at—is this your plant here?

A. Palmer, yes.

Q. And Pittsburgh?

A. Pittsburgh is $3 a gross ton.

Q. $3 a gross ton difference?

A. Yes, sir.

Q. Without asking you now anything further about this particular price, what was the generally quoted market price on that kind of wire at the time you made this contract?

A. At that time I think they were about 25 cents less than the next figure we had; 25 cents a ton less than the next lowest figure.

By Mr. Reed:

Q. You mean the American Steel & Wire Company's figure was about 25 cents a ton less than the next quotation?

A. Yes, sir.

By Mr. Dickinson:

Q. What I asked you, Mr. Wright—you may have misunderstood me—I asked you what was the quoted market current price on that kind of wire at that time; not the bids that you got?

A. You mean quoted in the Iron Age?

Q. Yes, the Iron Age.

A. I could not tell you. I do not go much by the Iron Age on quotations for wire rods.

Q. This is wire rods you are talking about now, is it?

A. Yes, sir.

Q. Have you made any other contracts with any of the subsidiaries of the United States Steel Corporation during this year? If so, for what and when?

A. Other than the United States Steel Corporation?

Q. No. Any contract other than this one.

A. No.

Q. This is the only contract you have made?

A. With the United States Steel Corporation or the American Steel & Wire Company?

Q. Yes. During the year 1913.

A. For wire rods?

Q. I said for anything else.

A. No. We made a contract for wire.

Q. When was that made?

A. I should say in September.

Q. Of this year?

A. Yes, sir.

Q. What was the quantity?

A. 1,500 tons, with an option of 25 per cent. additional.

Q. How much would that represent in money, about?

A. Most of that was special wire. It would run up to about $80,000.

Q. What percentage would that be of your annual consumption in the market?

A. Of our total annual consumption?

Q. Yes.

A. Of all our——

Q. No; in that particular commodity.

A. That would be similar, of course, to the commodity that we make in our own wire mills.

Q. I mean, of your purchases.

A. Purchased commodity?

Q. Yes.

A. Of that particular kind of stuff that would probably be, at the present time, based on the past year's business, about two-thirds. This contract was made to run, I think, until——

Q. I was just going to ask you about that. Until when?

A. May or June.

Q. Of next year?

A. I think so.

Q. Did you make out any specifications of what you required?

A. Yes, sir.

Q. And from whom did you solicit bids on that contract?

A. We got prices from the Spencer Wire Company and, on some portions of it, I believe, from the Morgan Spring Company; and on some portions of it from some of the other large companies.

Q. From whom did you get bids where the bids covered everything included in the purchase?

A. From no one.

Q. From no one except the American Steel & Wire Company?

A. No.

Q. That was the only one that could cover all of the commodities embraced in that contract?

A. Yes, sir.

Q. How was that bid framed? Was it for the contract as an entirety?

A. No; they gave us prices on each size and each different kind of wire that we named in our specifications. There might be twenty different kinds and twenty different prices.

Q. Did you intend to split up this contract or award it as an entirety?

A. They are the only people who could make certain of the kinds there that we wanted; and if their prices were favorable on all the other sizes, or practically all of them, we thought it was desirable to give them the contract.

Q. Then these things that the other people did not make and the prices upon them determined, to some extent, the question of awarding the contract as an entirety, did it not?

A. Provided the prices were right on the entire list.

Q. Yes; but the prices on these things that the others did not make were taken into consideration in awarding the entire contract?

A. There was no obligation on our part to award them the whole contract.

Q. I understand, but what operated with you in awarding it as an entirety? Did not the prices on these articles that the others did not bid on affect the general result?

A. We did buy some wire at the same time elsewhere; we

did split it up, really. We gave them that much, and I think we bought about 300 tons from another concern.

Q. 300 tons of what?

A. Wire.

Q. What kind of wire?

A. Galvanized wire and fence wire.

Q. Some of the wire that was embraced in this contract?

A. Yes, sir.

Q. From whom did you buy that?

A. From the Cambria Steel Company, I believe, or the Pittsburgh Steel Company. That contract was not made by me; it was made by our purchasing agent, Mr. Lorain.

Q. Which of these articles covered by this contract you made in September were made by others, and what others did you get bids from for those particular things? Just name the bidders on the particular kind of articles embraced in this contract, where there were competitive bids.

A. Mr. Lorain, our purchasing agent, handled that matter. I am quite sure he got bids on some sizes from the Spencer Wire Company.

Q. You did not handle it?

A. I did not handle it; no, sir.

Q. He got the bids and handled it?

A. He got the bids and handled it, and we looked it over together. I think I wrote one or two of the letters myself, but the correspondence was on his desk.

Q. Did you see the bids?

A. Yes.

Q. Now, then, answer my question, please: What concern bid on the same articles that were incorporated in this contract? Take them up separately and name who bid on the several ones.

A. You mean on every item in the contract?

Q. I want the items of the contract. As I understand, there were some things in this contract that nobody bid on except the American Steel & Wire Company. Is that true?

A. Yes, sir.

Q. There were other things embraced in the contract with respect to which their were competitive bids?

A. Yes.

Q. Now I want you to give me these separate commodities on which you took separate bids, and state who the competitors were as to each of those commodities; and if several of them bid on several, you can state that.

A. I am not quite sure about who did bid; but I think the Pittsburgh Steel Company and possibly the Cambria Steel Company, and the Youngstown Sheet & Tube Company, I am not sure about that, bid on the coarser and heavier products.

Q. You do not know that they did?

A. I am pretty sure they did, on some of them. Some of those concerns bid on some of them.

Q. Take the Pittsburgh Company. What are you sure they bid on?

A. I think they bid on the fence wire.

Q. The American Steel & Wire Company bid on fence wire, did they not?

A. I am not sure about the contract for the wire—the contract for 300 tons that I talked of placing. The other I know about, because I knew it was placed, and signed the papers.

Q. What I am trying to get at is this contract that was placed with the American Steel & Wire Company. Give me the names, if you can, of those who made competitive bids on any of the commodities that went in under that contract.

A. I think I have answered that question.

Q. I thought you seemed to modify it afterwards, and express a doubt. I do not want to control your answer in any way.

A. I cannot say positively as to all those names. I am pretty sure we had competitive bids, because we never place any order without competitive bids.

Q. And you have no distinct recollection of competitive bids?

A. No; not on that particular contract, because that was handled entirely by Mr. Lorain. The other one I spoke of, the 1,500-ton contract, I know a little bit more about.

Q. That is the former contract?

A. That is the American Steel & Wire contract, in September.

Q. That is the one you spoke of where you gave the price, is it not?

A. No. This is on wire. That was on rods.

Q. You say you do recollect about that 1,500-ton contract?

A. I recollect more about that, because——

Q. When was that contract made?

A. That is the one I have been talking about.

MR. REED: He has been talking about it right along, Judge.

By MR. DICKINSON:

Q. Made when?

A. In September.

Q. That was one of the elements in the September contract, was it not?

A. What was?

Q. What you have just been speaking about; the 1,500 tons?

A. Yes, it was.

Q. Of wire?

A. Yes.

Q. Who bid on that 1,500 tons?

A. I have said I thought the Spencer Wire Company bid on some portions of it; but I do not think any other company bid on the whole of it, because there was quite a big list of special wire there that very few companies can make the whole list of, if any.

Q. But the American Steel & Wire Company didn't make them all, did it?

A. Yes; also made fence wire, but it did not get all the contract on that.

Q. Well, now, do you know any of the bids that were made, other than that of the American Steel & Wire Company, for any of those wires, that went into this contract?

A. I could not tell you much about that, because Mr. Lorain handled all that.

Q. You do not know how they varied?

A. No, I do not know.

Q. Well, do you know what the current market prices were at that time on the several commodities entering into that contract?

A. There is no current market price; we bought wire at a little less than last year.

MR. DICKINSON: That is all.

WILLIAM EDWARDS MANNING

was called as a witness on behalf of the defendants, and being first duly sworn, testified as follows:

DIRECT EXAMINATION

By MR. LINDABURY:

Q. Where do you live?

A. Youngstown, Ohio.

Q. What is your age?

A. Forty-three.

Q. Business?

A. I am secretary and general manager of sales of the Youngstown Sheet & Tube Company.

Q. How long have you held that position of general manager of sales of that company?

A. Since January 1, 1913.

Q. How long have you been connected with that company?

A. Since November, 1901.

Q. What was your position next prior to the time when you were made general manager of sales?

A. I was assistant general manager of sales.

Q. How long did you hold that position?

A. Well, while I could not say when the title was made, it was practically my position during the existence of the company in the market as to selling material.

Q. I did not mean to ask you about titles, and care nothing about them, but about the work you did when you acted in that capacity.

A. I was assistant to the general sales manager or general sales agent during the period since the organization of the company and its engagement in active business.

MR. DICKINSON: You mean since 1901?

MR. LINDABURY: He didn't say that at all; I was going to ask him.

MR. DICKINSON: He has been with the company, he said, since 1901.

MR. LINDABURY: He did not give any date at all, Judge, I think.

MR. DICKINSON: I have it down here, and I think you will find that he said since November, 1901.

MR. LINDABURY: Did you mention that?

THE WITNESS: Yes.

MR. DICKINSON: I have it down, and I mentioned it now so as to help you.

MR. LINDABURY: I did not hear that, or at least I did not notice it.

By MR. LINDABURY:

Q. When was the company organized?

A. Well, the organization of the company was November, 1901, the incorporation.

Q. When did they begin active business?

A. In 1902.

Q. And it is since that date that you have held the positions, first of assistant to the general manager, and later as general manager of sales?

A. Yes.

Q. Where is the company located, at Youngstown?

A. At Youngstown, Ohio.

Q. What business is it engaged in?

A. Well, the manufacture and sale of iron and steel products. It markets semi-finished steel in the form of blooms, slabs, billets and sheet bar, skelp, iron and steel wrought pipe

Q. You call that semi-finished?

A. No.

Q. What did you say for the semi-finished?

A. Well, I gave the semi-finished for the first four.

Q. Please repeat the semi-finished, so as to divide them.

A. Well, billets, blooms, slabs and sheet bar.

Q. Do you also manufacture and sell finished products?

A. Yes, such as skelp, iron and steel wrought pipe, wrought iron and wrought steel pipe, as distinguished from cast; we use that word. Iron and steel sheets, roofing, wire rods, wire, wire nails and wire fencing.

Q. And of wire do you make a general line or any particular lines of wire?

A. We make a general line of black and galvanized wire, barbed wire, and many diversified products of wire.

Q. Does that hold with regard to these other materials that you manufacture; that is, that you make a general line?

A. A general line of those products.

Q. Where do you find a market for your products?

A. Our market is in all the centers of use and distribution in the United States, and in Canada, Mexico, Cuba and Porto Rico, as well as other foreign countries.

Q. Do you sell on the Pacific Coast as well as east of the Rocky Mountains?

A. We do.

Q. Is the sale of your products made in competition with the products of other steel manufacturers in this country?

A. It is.

Q. Does your answer relate to all the lines of production and sale that you have mentioned?

A. It does.

Q. How long has that been the case?

A. Ever since we have been selling material.

Q. Have the prices for your products ever been fixed by agreement between yourselves and other competitors?

A. They have not.

Q. Is that true of each and every article of production that you have mentioned?

A. It is.

Q. And of each and every year during the time you have been producing and selling?

A. It is.

Q. Have the prices that you have obtained been uniform with the prices that your competitors have obtained?

A. They have not always.

Q. Is that answer true of each and every year that you have been in business?

A. It is.

Q. And is it true of the various products that you have produced and sold?

A. It is.

Q. Not of any one or a few, but of all of them?

A. Yes.

Q. Do you mind telling us, I do not know whether you would object to it or not, and if you do you need not, what your annual tonnage is of production?

A. Now?

Q. Yes, or at different periods?

A. We are making now—our capacity is about 1,000,000 tons of steel ingots a year.

Q. How much was it five years ago, or tell me in some way; give me in some way an idea of the growth of the business of your company; your company has grown, I suppose, since 1901?

A. The full story would include a good deal. If you would like me to, I will tell it.

Q. How much was it the first year, 1902?

A. We had no steel plant in 1902. In 1902 we started with six sheet mills and three pipe mills and possibly 25 single puddling furnaces; and we built one skelp mill in the latter part of 1902.

Q. Go on. Give us an idea in your own way.

A. In 1906 we finished a steel plant with a capacity of about 400,000 tons of ingots a year, and also two additional skelp mills. In 1907 we added two additional pipe mills. I may not be just exactly right in the year, but approximately these times. In 1908 we purchased the Morgan Spring Company's rod mill and wire mill and doubled the capacity of that plant, built a new nail factory and fence factory and other equipment in connection with that during the next two years. In 1908 we put in two blast furnaces. In 1909 we completed three more pipe mills. With the addition of those blast furnaces we increased our production of ingots to approximately 600,000 tons per year.

By Mr. Dickinson:

Q. That was in 1908?

A. That would be 1909 that we increased that after the completion of those furnaces.

Q. You brought it up to 600,000 tons?

A. 600,000 tons; yes, sir. In 1911 we completed another blast furnace. In 1913 we completed an open hearth steel plant, bringing up our production of steel ingots to 1,000,000 tons, and also completed another blast furnace. I would like to add to that that we purchased a blast furnace in the early part of December, if I may add that to my testimony, in 1902; we purchased a small blast furnace which we sold about 1909 or 1910.

By Mr. Lindabury:

Q. Have you now completed your answer, Mr. Manning?

A. I think that covers it.

Q. How much capital did you start with?

A. Our organization was incorporated for $600,000.

Q. What is your capital to-day?

A. We have issued $15,000,000 of common and $5,000,000 of preferred.

Q. $20,000,000?

A. Yes, and some bonds.

Q. How much of bonds?

A. Approximately $2,000,000.

Q. About $2,000,000?

A. $2,000,000.

Q. Making $22,000,000 all told?

A. Yes, sir.

Q. All employed in the business?

A. All employed in the business.

Q. Profitably so, I take it?

A. Well.

Q. Have the subsidiaries of the United States Steel Corporation been your competitors in these various lines of production and sale?

A. They have.

Q. Some one or other of them in most every one of the lines, I take it, have they not?

A. In every line that we manufacture in steel.

Q. And is that so throughout the country?

A. Throughout the country?

Q. Has their competition during the period that you have been in business, and in the various localities where you have met them, been fair, open and above board, or otherwise?

MR. DICKINSON: I object to that unless he confines it to what he knows of his own knowledge.

MR. LINDABURY: He is assumed to answer only what he knows.

THE WITNESS: I would consider their competition fair.

By MR. LINDABURY:

Q. Has it ever been unfair in so far as has come to your attention?

A. No, I would not say it has been unfair in any connection that has come to my knowledge.

Q. Has it been severe?

A. The competition?

Q. Yes.

A. Very.

MR. LINDABURY: Take the witness.

CROSS EXAMINATION

By MR. DICKINSON:

Q. Mr. J. A. Campbell is connected with your company?

A. President of our company.

Q. How long has he been president of your company?

A. I would say approximately since 1903 or 1904.

Q. And did you attend the meetings of any of the subcommittees appointed in pursuance of the Gary dinners that were presided over by Mr. Campbell?

A. I attended meetings presided over by Mr. Campbell.

Q. Well, are those committees——

A. I do not know whether you would call them committees

or not, but I attended meetings called by Mr. Campbell, or presided over by Mr. Campbell.

Q. At which were present representatives of various manufacturers in the lines of business in which you were manufacturing?

A. I do not believe that I attended any that Mr. Campbell presided over except those manufacturing sheets.

Q. You did attend those meetings?

A. Yes.

Q. And tin plate?

A. I think tin plate manufacturers were also included.

Q. Just state what companies were represented at those meetings besides your company?

Mr. Lindabury: Which ones?

Mr. Dickinson: The meetings that he attended, of course. He said he attended meetings of sheet——

By Mr. Dickinson:

Q. Didn't you?

A. Manufacturers of sheets.

Q. That is what I am talking about, at the meetings of manufacturers of sheets, at which meetings Mr. Campbell presided and at which you attended, please state what representatives you saw there of various manufacturers in that line?

A. Among those present at any meetings of that kind—representatives of the concerns you want, not the persons?

Q. Yes, name the people who were there, whom they represented.

A. The DeForest Sheet & Tin Plate Company.

Q. Represented by whom? Give it as you go along.

A. Mr. Wade Taylor. Now, I will have to correct that because that concern was not in existence for a long time, but he perhaps represented another company. The Niles Iron & Steel Company, which was perhaps at that time the Thomas Steel Company; they changed the name; that was W. A. Thomas. Empire Steel Company, Mr. Warner; American Rolling Mill Company, Mr. Horner; Parkersburg Iron

& Steel Company, Mr. Nieman; the Inland Steel Company, Mr. Block and Mr. Jones. It is rather difficult, perhaps, to remember all these manufacturers without a full list.

Q. Do you remember anybody representing the American Sheet & Tin Plate Company?

A. The American Sheet & Tin Plate Company attended some meetings.

Q. I am talking about meetings when you were present.

A. Any of the meetings when I was present.

Q. At those where you were present whom did they have representing them?

A. They had Mr. Pargny and Mr. Andrews.

Q. Now, how about Mr. Bray?

A. Mr. Bray may have attended. I do not remember Mr. Bray's presence.

Q. Now, you say that your business, taking the common stock, preferred stock and the bonds, represented $22,000,000 of capital; is that correct?

A. Yes; approximately.

Q. How long has it been that amount?

A. Since the 1st of July, 1913.

Q. How much was the increase then?

A. There was an increase of common stock from $10,000,000 to $15,000,000 of issued common stock, $5,000,000 of which was a stock dividend.

Q. What I am trying to get at is: You say that that was the capitalization at that time. It was increased from what to that amount?

A. The common stock was increased from $10,000,000 to $20,000,000, authorized, of which $5,000,000 was issued as a stock dividend.

Q. That was increased by five millions?

A. Yes.

Q. The preferred stock: Was that increased at that time?

A. No; the preferred stock was issued and sold to the common stock holders within a period of perhaps two or three years, in two different issues.

Q. Before that time?

A. Before that time.

Q. Then the bonds were issued when?

A. The bonds were issued in 1905 or 1906, part of them, and the other part when we purchased the Morgan Spring Company's plant. We paid for it in bonds.

Q. What of the subsidiaries of the United States Steel Corporation competed with you in any line? Just name who your competitors were.

A. The Carnegie Steel Company, the Illinois Steel Company, the National Tube Company, the American Steel & Wire Company and the American Sheet & Tin Plate Company.

Q. In size, in your line, how did you compare in capacity with the Carnegie?

A. Now?

Q. At any time. Yes, take it now, if you want to.

A. Without reference to statistics, it would be pretty hard to say. I should judge that the Carnegie Steel Company's output for steel ingots was, at the present time, from four to six times as large as ours.

Q. Take the Illinois Steel Company.

A. I do not know very much about the Illinois Steel Company, because we come in contact with them very little.

Q. The Federal. That is really the Federal, is it not?

A. I mean we do not, practically, compete with them to any large extent, because it would only be in connection with our semi-finished goods.

Q. It is very much larger than yours?

A. I would not say it is very much; I would not say the Illinois Steel Company is very much larger than ours.

Q. Did you ever hear of the plant at Gary?

A. That, I understand, belongs to the Indiana Steel Company.

Q. That is a part of the Corporation, is it?

A. Yes, sir.

Q. How do you compare with that in size?

MR. LINDABURY: Judge, my mind was diverted. In what production?

MR. DICKINSON: Ingot capacity.

THE WITNESS: I think we perhaps make about half as much as they do. I am not certain of these facts without referring to statistics, because I have not definite knowledge of the——

By MR. DICKINSON:

Q. Take the American Steel & Wire Company: How do you compare with them in ingot production?

A. In ingot production we perhaps make 50 per cent. as much in ingots as they do.

Q. You mean about half of what they make?

A. Yes.

Q. Take the ingot production of the United States Steel Corporation: How does your output in ingots compare with the whole ingot production of the United States Steel Corporation per annum?

A. I should judge that our present capacity was about one-fifteenth or one-sixteenth of theirs.

Q. Of the United States Steel Corporation?

A. Yes; but I have not the actual facts or their own figures.

Q. Do you know whether they produced more than 17,000,000 tons of ingots last year?

A. I do not.

Q. How much did you produce?

A. Last year?

Q. Yes.

A. About 650,000 to 700,000 tons.

You will note that I said we put into operation this steel plant this year, which increased our capacity up to 1,000,000 tons.

Q. Do you know Mr. Henry C. Frick?

A. No, sir.

Q. You know who he is?

A. I know who he is; yes, sir.

Q. Do you know what connection he had with your company?

A. I do not know of any connection he had with our company.

Q. Do you not know he was a stockholder, a large stockholder?

A. I have heard that he was a stockholder. I have no knowledge that he was.

Q. Is he still a stockholder of your company?

A. Not that I know of.

Q. If he ceased to be a stockholder, you do not know it?

A. I would understand that if he was my knowledge of it is hearsay. My hearsay knowledge would say that he was a stockholder, and that his stock he sold.

Q. When?

A. A long time back. I could not say when.

Q. To the United States Steel Corporation?

A. No, sir.

Q. Do you not know that the United States Steel Corporation acquired part of the stock of your company?

A. No, sir; I do not.

Q. You do not know anything about that?

A. No, sir.

MR. LINDABURY: Nor anybody else?

MR. COLTON: Yes, it is in evidence, Mr. Lindabury.

MR. LINDABURY: No, no, I think not.

MR. COLTON: I think I can point to it.

THE WITNESS: My knowledge would be that the stock of Mr. Frick—but this is hearsay and I could not say it definitely—was acquired by people in Youngstown, Youngstown interests. I think that can very easily be shown.

MR. LINDABURY: Judge Dickinson does not know anything about it, and I think you are mistaken, Mr. Colton.

MR. COLTON: I do not think so.

MR. LINDABURY: I am sure you are mistaken about that. I do not blame the Judge, because he does not remember.

MR. DICKINSON: I am rather disposed to think my memory is better than yours, because the witness said here that he had been in the company since 1901, and I wrote it down, and you were disposed to dispute my record.

MR. LINDABURY: I had not heard it.

MR. DICKINSON: You may not have heard this.

MR. LINDABURY: Have you any independent recollection on this point, Judge?

MR. DICKINSON: Only what Mr. Colton said.

MR. LINDABURY: Mr. Colton may be right, but I have not the faintest recollection of ever having heard it.

MR. COLTON: Yes. I do not know how long they kept it.

MR. LINDABURY: It was not in any of the testimony. I am sure you are mistaken about that.

THE WITNESS: We would have heard of it in Youngstown if it had been so. I never heard it mentioned before.

By MR. DICKINSON:

Q. You hear everything in Youngstown?

A. We generally hear everything about our own company.

Q. Now, in 1902, that was the first year you began manufacturing, I believe; I do not think you have stated the amount of your tonnage in ingots that year.

A. We did not have a steel plant, and we did not make any ingots.

Q. What did you make that year?

A. We made sheets and pipe.

Q. To what extent did you make sheets, in tonnage, that year?

A. We had six sheet mills, and we possibly made in 1902 35,000 or 40,000 tons. No, let us see—20,000 tons of sheets.

Q. How is that compared with the output of the American Sheet Steel Company?

A. At that time?

Q. Yes.

A. I suppose that their output at that time was approximately three-quarters of a million or a million tons.

Q. Of pipe what was your output at that time?

A. We made about 20,000 tons.

Q. In pipe?

A. Yes.

Q. What was your output then, compared with the National Tube Company?

A. I suppose their output was perhaps three-quarters of a million tons, but I have no knowledge of their output those years; it is only my estimate of what it might be.

Q. Now, you say that your market is in all centers of the United States which are distributing points?

A. And points of use.

Q. How long have you been selling in the foreign trade?

A. Since 1905 or 1906, and possibly before.

Q. Well, the first year that you did, what was the extent of your foreign trade in sales, in dollars?

A. That would be difficult for me to say.

Q. Well, in tonnage, then?

A. Possibly three or four hundred tons.

Q. Well, now, what year do you think that was?

A. 1905 or 1906.

Q. Take the year 1907; assuming that the other was 1906, what was your tonnage in foreign sales?

A. Probably double that.

Q. In 1908?

A. In 1908 we probably shipped outside of this country 15,000 to 20,000 tons.

Q. 15,000 to 20,000 tons?

A. Yes; we had a very large export business that year.

Q. What was it the first year?

A. Three or four hundred tons. These export shipments would include shipments to the Isthmian Canal.

Q. To foreign countries strictly, leaving out the Panama Canal and the Philippines— do you sell to the Philippines?

A. Would you include Cuba and Porto Rico?

Q. No, I would not include Porto Rico, but strictly foreign countries?

A. Would you include Mexico?

Q. Yes, I think that is decidedly foreign.

A. In 1908 I would make that possibly 5,000 tons.

Q. Well, has your foreign business increased?

A. Yes.

Q. Right along?

A. Some years it would be much larger than others.

Q. What was it the last year?

A. We had a large export business last year.

Q. Is the organization of your company such as to make you capable of going into foreign business and competing for it?

A. Well, we do.

Q. You do actually compete with foreign countries?

A. Yes; in some sections.

Q. Did you say some sections?

A. In some places, the countries to which we export.

Q. To what countries do you export?

A. Mexico, Cuba, Japan and the Philippines—well, you do not include that.

Q. You do go to the Philippines, do you?

A. Yes. Russia, what you might call the Balkan States, and India.

Q. Then you have so organized your business and your capital is such that you can carry on successfully a foreign business, can you?

A. To a certain extent.

Q. And have been doing it, and it has been increasing right along, has it?

A. Yes.

Q. You say you did not attend all these meetings when Mr. Campbell was present?

A. Well, I cannot say definitely that I attended all meetings at which he was present. He was not present at all the meetings I attended, and probably I did not attend all the meetings he attended.

Q. Well, he was in a position of higher authority and occupied an attitude toward that committee different from yours, did he not?

A. I would not say he occupied any different attitude, except that he was chairman of the meeting, if there was such a thing as a chairman.

Q. Well, he called the meetings, did he not?

A. Well, I should say that he did, at times.

Q. You didn't call any?

A. I didn't call any.

Q. He presided over them, didn't he?

A. He presided over them.

Q. And you did not?

A. I did not.

Q. And if there were any official communications sent, you did not send them, did you?

A. No, sir.

Q. So far as your company was concerned was not his attitude different in a variety of respects towards the members of the committee from what yours was?

A. Yes, naturally, from his position.

Q. Now, when you spoke of combinations you spoke of such as you had actual knowledge of?

A. Combinations?

Q. Yes. You were asked whether there were any combinations or agreements about prices on the articles which your company sold. You were only speaking so far as your actual knowledge of that; you were not speaking more broadly and beyond that, further than your knowledge went?

A. I am only speaking so far as my knowledge goes.

Q. You are confining it to that?

A. Yes.

REDIRECT EXAMINATION

By Mr. Lindabury:

Q. Did you have knowledge of the prices obtained and quoted by your company for your products?

A. Yes, sir.

Q. Did Mr. Campbell have anything to do with that except in the general supervisory way the president of a company does?

A. Just in that respect as he had his interest in all the departments of our company.

Q. The matter of quoting and fixing prices and making contracts, however, was especially in your department, was it not?

A. Yes.

Q. Did Mr. Campbell ever attempt to interfere with the

giving of prices by you, or the conduct of your business with respect to prices or quotations?

A. No; our association was always very cordial and pleasant and relationship very close.

Q. Did he ever attempt to dictate to you any agreed upon price or any other price than that which market quotations seemed to you to justify?

A. He never attempted to dictate any price that I thought was wrong, unless he could convince me or I could convince him of it being advantageous for our company.

Q. Did he ever suggest or dictate a price to you based upon any agreement that he had made or purported to have made with competitors?

A. No, sir.

MR. LINDABURY: That is all.

RE-CROSS EXAMINATION

By MR. DICKINSON:

Q. Do you mean to say that on the matter of prices Mr. Campbell had less authority than you had?

A. No, sir.

Q. You do not mean to intimate that by any of your answers, do you?

A. No, sir.

Q. Didn't he have full knowledge of what was going on?

A. Not in all cases.

Q. Whenever he wanted to, didn't he?

A. As president of the company, of course, he had access to all information he wanted.

Q. And generally, as president, he kept in touch with the affairs of the company and knew what it was doing?

A. In a general way.

Q. And didn't he do it in that particular way?

A. Not always.

Q. Do you mean to minimize his control or knowledge so far as the administration of the affairs of the company is concerned?

A. No, sir. A position such as held by Mr. Campbell neces-

sitates his giving attention to a great many matters, and the question of detail in connection with selling products has to be delegated to someone who is in close touch, and those prices have to be fixed, even when Mr. Campbell is not in his office or not in town, and perhaps out of the country; prices had to be fixed just the same as at any other time.

Q. Well, are you meaning to suggest that Mr. Campbell had nothing to do with prices or control of prices, and that your authority in that matter was higher than his?

A. No, sir.

Q. Nothing of that sort is meant by your testimony?

A. I am trying to infer that Mr. Campbell left the question of details in connection with various departments in the hands of his subordinates who were employed for that purpose.

Q. Did Mr. Campbell have nothing to do with the control of your company as to its policy in prices?

A. He had control of our policy and the policy of our company.

Q. Didn't he have absolute control and authority? Did you have any right to control him? Didn't he have control of you?

A. He had control of me.

Q. Didn't he have control of the policy of the company as to prices?

A. He had control of the policy of the company as to everything.

Q. And what he said about that went?

A. If he said it.

Q. If he says that he said it would you say that that went?

A. I would.

Q. How far west did you sell your sheets in this country?

A. We sold them to the Pacific Coast.

Q. And generally all over the United States?

A. Yes, sir.

Q. So the question of location and remoteness from markets did not necessarily restrict you in your competition?

A. No, sir.

Q. And you met your competitors in this country and in Canada and in Mexico, did you?

A. No, we did not meet them as we would in this country, because we were always in a position to compete in the home market; we did not go after the foreign market, of course, as we did the domestic business.

Q. Take the domestic business. The question of location and situation did not prescribe you necessarily to any narrow territory around Youngstown, confined to any one or two or three states, or something of that sort?

A. No, sir.

Q. You were not confined so that you did not sell east of the Pittsburgh district?

A. No, sir.

Q. And you were not confined so you did not sell west of the Mississippi River or the Missouri River?

A. No, sir.

Q. And you sold south of the Ohio River?

A. Yes, in every State of the Union.

Q. And how about tubes?

A. Well, we did not manufacture tubes; we manufactured pipes.

Q. How about pipe?

A. That is the tubes; you might perhaps consider boiler tubes as such, but we do not make tubes; we are large manufacturers of pipe; that is a principal part of our finished product.

Q. What are they used for?

A. For steam, water and gas; oil country goods.

Q. What kind of pipe are those, seamless?

A. Welded pipe.

Q. Do they come in competition with seamless tubes?

A. No, sir.

Q. I mean to say, are they used interchangeably for the same purposes.

A. No, sir.

Q. Not at all?

A. There may be cases where either one could be used.

Q. It would be a question of desirability and price, would it?

A. I suppose it would be, but we do not know of any competition on our product from seamless tubes.

Q. What is your competition in and who are your competitors?

A. Our competitors in steel pipe are the National Tube Company; Wheeling Steel & Iron Company; La Belle Iron Works; Mark Manufacturing Company; Spang, Chalfant; Republic Iron & Steel Company; Central Tube Company; Harrisburg Pipe & Pipe Bending Company.

(At the request and for the convenience of the witness, his further cross examination was deferred until a later date to be agreed upon.)

MR. DICKINSON: Certain contracts, produced by the witness in response to a request by counsel for the Government, and identified as Government Exhibits Nos. 443 to 468, inclusive, are offered in evidence by the Government as part of the cross examination of said witness.

It is agreed that the original contracts shall, when copied and compared, be returned to said witness Reed; said copies to be used with the same force and effect as if they were the originals.

(The above-mentioned contracts were thereupon marked "Government Exhibit (Morton W. Reed) No. 443, October 20, 1913" to "Government Exhibit (Morton W. Reed) No. 468, October 20, 1913," inclusive, it being agreed by counsel that only such of the above contracts be printed as may be requested by counsel on either side.)

MR. DICKINSON: The Government offers in evidence, to be included as a part of the contract between the American Sheet & Tin Plate Company and the Amsterdam Supply Company for 1904-5, heretofore marked "Government Exhibit (Morton W. Reed) No. 446, October 20, 1913," the following newspaper extract together with the reply of the American Sheet and Tin Plate Company to the Amsterdam Supply Company in reference to said extract; said extract and reply having been detached from the aforesaid contract.

MR. SEVERANCE: I object to the newspaper clipping on the ground that the statement therein contained is a matter of opinion of a headline writer, is in no way a declaration of

the defendant, the United States Steel Corporation, or of any subsidiary thereof, and is not evidential for any purpose in this case; that the newspaper article does not bear out the said headline in any event; that there is nothing to show from what source said newspaper clipping was cut, or in what paper it appeared; that the so-called reply of the American Sheet & Tin Plate Company under date of August 1, 1904, to the said newspaper clipping and each and every part thereof, is incompetent, irrelevant and immaterial.

(The newspaper clipping and reply of the American Sheet & Tin Plate Company are as follows:)

UNEXPECTED TIN PLATE CUT.

PRICE REDUCTION CONSTRUED AS INDICATION THAT TRUST INTENDS TO DOMINATE THE INDUSTRY.

A reduction of $3 a ton in tin plate, announced by the American Sheet Steel and Tin Plate Company, is a great surprise to the trade. The cut brings the price of 100-pound coke terne plates to $3.30 a box, the lowest reached since the so-called tin plate trust was formed.

It is the belief in Pittsburgh that the reduction in the price was made because the Tin Plate company was short of orders, but in trade circles this idea is discredited.

(Pencil memorandum attached to above newspaper clipping:)

A. S. & T. P. Co.
Please
confirm to us
Wrote

(Rubber stamp:) Answered
Jul 30 1904
G. J. W.

AMERICAN SHEET & TIN PLATE COMPANY
Frank Dickerson
District Sales Agent

Battery Park Building
New York, August 1st, 1904

(Rubber stamps:)

No Reply

Noted
Aug 2 1904
M. W. R.

Amsterdam Supply Company,
New York City.

Dear Sirs,

Replying to yours of the 30th ult, we would say that the price of Cokes, Charcoals and Ternes has been reduced 15c basis, same taking effect July 25th. The terms also have been changed from 1 to 2% for cash.

Yours very truly,

American Sheet & Tin Plate Company,

Frank Dickerson, D. S. A.,
by
W. H. Boldridge

E.H.

(Whereupon an adjournment was taken until to-morrow, Wednesday, October 29, 1913, at 10:30 a. m.)

ONE HUNDRED AND FIFTH DAY.

EMPIRE BUILDING,
71 Broadway, New York City,

Wednesday, October 29, 1913.

Before Special Examiner HENRY P. BROWN.

Present on behalf of the United States, MR. DICKINSON and MR. COLTON.

Present on behalf of the defendants, MR. LINDABURY, MR. SEVERANCE, MR. BOLLING and MR. REED.

SAMUEL PORCHER

was called as a witness on behalf of the defendants, and being first duly sworn, testified as follows:

DIRECT EXAMINATION

By MR. REED:

Q. Where do you live?

A. I live in Philadelphia.

Q. What is your present position?

A. I am purchasing agent of the Pennsylvania Railroad Company.

Q. How long have you been purchasing agent for that company?

A. Since the 21st day of July, 1913.

Q. Prior to July 21st, 1913, what was your position with the company, if any?

A. I was assistant purchasing agent of the Pennsylvania Railroad Company.

Q. How long were you assistant purchasing agent?

A. I was appointed assistant purchasing agent in March, 1894, I think it was March.

Q. And did you serve as assistant purchasing agent continuously from March, 1894, to July, 1913?

A. Yes.

Q. Prior to 1894 what was your occupation?

A. I was in the mechanical department, the motive power department of the Pennsylvania Railroad Company.

Q. You were unconnected, then, with the purchasing department?

A. No, I was not in the purchasing department.

Q. And had no intimate knowledge of its affairs before that time?

A. No.

Q. As purchasing agent and assistant purchasing agent are you familiar with the purchases that have been made from time to time by the Pennsylvania Railroad Company of steel materials of various kinds.

A. Yes.

Q. Do all of these purchases fall within your jurisdiction?

A. Yes. What do you mean by purchases, exactly, Mr. Reed?

Q. I mean all of the steel supplies that are bought by the Pennsylvania Railroad Company for its use, and if there is any exception to that general statement I wish you would tell us what it is.

A. I don't think of anything that could possibly be classed as an exception except perhaps rails, steel rails.

Q. By what officer of the company are the purchases of steel rails arranged?

A. The negotiations, or the distribution of the business of steel rails, has been made by the president of the Pennsylvania Railroad Company. I might say there, if you will allow me, the orders for steel rails, after the apportionment has been made by the president, are issued by the purchasing agent, and bills and so forth passed.

Q. What do you mean by apportionment?

A. Well, some of the rails each year are ordered from one company and some from another, some from a third, and maybe some from a fourth or fifth, and the total amount that is to be ordered, and the percentages of the amount to go to one or the other or a third, whatever it may be, is decided by the president, I believe.

Q. How about the price to be paid?

A. That is settled at the same time.

Q. By the president's office?

A. By the president's office, I presume after consultation with the different departments of the railroad.

Q. And the matter, as it comes to you, is settled both as to price and apportionment of the order?

A. Yes.

Q. And the total quantity?

A. Yes.

Q. So that in real purchases the functions of your office are largely mechanical, I assume?

A. Yes, in that respect.

Q. In purchases of other steel supplies, Mr. Porcher, what discretion, if any, is left to your office?

A. The quantity is fixed by requisition which we receive, and then the distribution of the business and the price are left to the purchasing agent.

Q. So that your discretion is quite wide in those matters?

A. Yes.

Q. Is it customary for your company to seek competitive bids from the different manufacturers of steel products before placing the orders? I am speaking now of all steel products, other than rails.

A. Yes, sir.

Q. Are your purchases of steel materials, supplies other than rails, extensive or otherwise?

A. That is comparative, of course. I suppose they are——

Q. Extensive?

A. Extensive.

Q. Have you made any effort to estimate the quantity of steel supplies of various kinds that have been purchased through your office since the beginning of the year 1901?

A. Yes, sir.

Q. Have you been able to make an estimate with entire accuracy?

A. No.

Q. Have you gone through the records of your office as far as they have been preserved on that subject?

A. Yes, sir.

Q. In the effort to prepare such a statement?

A. Yes, sir; I have.

(Here a paper was marked "Defendants' Exhibit No. 119.")

Q. I show you Defendants' Exhibit 119 and ask you if that is the statement which you have prepared.

A. It is.

Q. Will you state whether or not you believe that to be a fairly accurate statement of your steel purchases other than rails during this period between 1901 and 1913?

A. Yes, I think it is.

Q. So far as its accuracy is concerned, is it such a statement as you in the business of your office would rely upon as being a fairly close approximation?

A. Yes, I would consider it as a very good indication.

Q. And you do not mean that it is much more than that; I mean you do not vouch for the accuracy of the figures to the last degree.

A. No, by no means.

Q. Mr. Porcher, in the last eight or nine years have you obtained bids from the different subsidiary companies of the United States Steel Corporation?

A. Yes.

Q. Will you give us the names of those companies which you remember as having submitted bids to you?

A. I think I have a little memorandum which I would like to consult, if I may.

Mr. Reed: I think there is no objection to it; just as to the names of the companies.

Mr. Dickinson: No objection.

The Witness: The American Bridge Company; National Tube Company; Carnegie Steel Company; American Steel & Wire Company; American Sheet & Tin Plate Company.

By Mr. Reed:

Q. Have those companies submitted frequent bids to you on your various needs?

A. Yes, I should say so, frequently.

Q. Have you at the same time asked quotations from

other manufacturers of the same products as are produced by those subsidiaries?

A. Yes, sir.

Q. Now, Mr. Porcher, in the last eight or nine years have your purchases of such supplies been made on a competitive basis?

A. Yes.

Q. What controls the placing of your orders?

A. What controls the placing of our orders?

Q. Yes; what elements govern in determining which of these bidding companies shall receive the order?

A. Well, there are a good many.

I always like to say that there are three things primarily: We want the right kind of material at the right place at the right time, and then we want to get it for the smallest amount of money that we can.

Q. What method is practiced by your office in tabulating or contrasting the bids received on such supplies?

A. We get these bids in, the quotations, and then tabulate them on a standard form that we have, which shows the name of the bidder, or rather, the name of the company that we have asked quotations of, whether he sends in a bid or not, and then the price that he quotes; the quantity of material, the kind of material that we are asking for, and the place to which it is to go; that is, the place at which it is needed, and the place where they will manufacture it and where they will deliver it to us, and at what time they will deliver it and under what conditions, and the prices that they will make for this material. There may be some other little points that I do not recall just now.

Q. So in that way you have excellent opportunity to contrast the offers that are made to you by the different companies?

A. Yes, sir.

Q. Now, during this period have the quotations that have been made to you on the products in which these Steel Corporation subsidiaries that you have named have bid, varied in price?

A. Yes, sir.

Q. And have those variations in price continued throughout the past eight or ten years?

A. I should say yes, to the best of my recollection.

Q. And is that still the case, Mr. Porcher?

A. Yes, sir.

Q. Confining your attention now to those biddings in which the Steel Corporation subsidiaries took part, because that is all I have a right to inquire about, have you observed any indication that these subsidiary companies of the Steel Corporation have combined with their competitors to fix the prices to be quoted on their respective products?

MR. DICKINSON: This is objected to as calling for a conclusion of the witness, based upon facts that exist in the witness' own mind and are not shown on the record.

THE WITNESS: No; I have not observed any indication of that. I can not recollect any indication of that kind with regard to the purchases by the Pennsylvania Railroad Company from these concerns.

By MR. REED:

Q. Mr. Porcher, have you endeavored to secure a statement of the tonnages of the Pennsylvania Railroad Company's rail orders in the years 1901 to 1913, both inclusive?

A. Yes, sir.

Q. Have you those records of your company that are retained that show that?

A. Yes.

MR. DICKINSON: This is from 1901 to 1913?

MR. REED: Yes.

(At this point a paper was marked Defendants' Exhibit 120.)

By MR. REED:

Q. I show you Defendants' Exhibit No. 120. Is that the statement you refer to?

A. Yes, sir.

Q. Do you believe that to be an accurate statement of the apportionment of your rail orders for those years?

A. I do.

Q. Mr. Porcher, do you know Mr. Percival Roberts, Jr.?

A. Yes, sir.

Q. He is a director of the Pennsylvania Railroad, is he not?

A. Yes.

Q. How long have you known him?

A. I have known him almost the entire time of my connection with the purchasing department of the Pennsylvania Railroad.

Q. Will you state whether or not Mr. Roberts has ever attempted to influence the price or placing of an order for steel supplies through your department?

A. Not that I know of; not that I have any knowledge of or can recollect.

Q. So far as you know or recollect, has he ever attempted to influence you in favor of any of the subsidiaries of the United States Steel Corporation?

A. No, sir; he has not.

Q. Mr. H. C. Frick is also a director of the Pennsylvania Railroad, is he not?

A. I believe so, yes.

Q. Has he at any time attempted to influence you or anyone in your department, so far as you know, in the placing of an order or the fixing of a price for steel supplies for the Pennsylvania Railroad Company ?

A. He has not. I do not know Mr. Frick.

Q. Do you know Mr. Frick to see him?

A. I think I probably would know him if I should see him.

Q. But you do not know him personally?

A. No, sir.

Q. You never spoke to him about purchases?

A. No.

Q. Or anything else?

A. No.

Q. Did you know Mr. C. A. Griscom during his life time?

A. Yes, sir.

Q. He was a director of the Pennsylvania Railroad, was he not?

A. Yes, sir.

Q. Did Mr. Griscom at any time seek to influence you or your department in the placing of an order for steel supplies, or in the fixing of a price for them?

A. I think not. I do not remember.

Q. You think you would remember it if either of those three directors had ever attempted to influence you in that regard?

A. Yes, sir; I think I should.

Q. It is customary for them to leave you alone, is it not, in that matter?

A. Yes, it is.

CROSS EXAMINATION

By Mr. Dickinson:

Q. The directors do not, directly, personally, give any orders or directions to any of the subordinate departments, do they?

A. I do not think they do, personally.

Q. They never have, have they?

A. I do not believe they ever have.

Mr. Dickinson: Are you intending to offer this paper in evidence, Mr. Reed?

Mr. Reed: At the conclusion of the cross examination, yes.

By Mr. Dickinson:

Q. Mr. Porcher, the Pennsylvania Railroad is one of the largest corporations, and has, since 1901, been one of the largest in the United States?

A. The largest railroad corporation, I believe.

Q. Is it not one of the largest corporations, anyway, in the United States?

A. Yes; certainly it is, yes.

Q. These purchases that you speak of: Do they cover the lines west of Pittsburgh?

A. No; not west of Pittsburgh.

Q. So these purchases you have testified to do not refer to anything west of Pittsburgh?

A. Nothing west of Pittsburgh.

Q. What is your mileage west of Pittsburgh?

MR. REED: By "your," what do you mean, Judge?

MR. DICKINSON: I mean the lines controlled by the Pennsylvania Railroad Company. I think I should have been more explicit.

THE WITNESS: Do not ask me, Judge. I cannot tell you exactly what it is.

By MR. DICKINSON:

Q. I want it approximately.

A. They extend from Pittsburgh to Chicago, Pittsburgh to Cleveland and various points on the Lakes, Pittsburgh to St. Louis and Cincinnati and all through that section.

Q. Down to Louisville?

A. Yes, I believe so; from Indianapolis down to Louisville.

Q. Is not the mileage west of Pittsburgh larger than the mileage east? I mean, main line; not counting sidings or double tracks?

A. Maybe it is. I do not know. Maybe it is; or possibly it is not. I really do not know.

Q. At any rate these statements of yours have had no reference to anything except east of Pittsburgh?

A. Just east of Pittsburgh.

Q. East of Pittsburgh? That would mean in the period of twelve years an enormous number of transactions, would it not?

A. A great many.

Q. In the purchasing of these various products you have testified about?

A. A great many.

Q. Your papers accumulate, I suppose, with great rapidity?

A. Yes, sir.

Q. What is the custom of your company in regard to keeping papers as to periods? Have you certain periods back of which you stow papers in warehouses or destroy them, do not keep them?

A. I think they are governed by the Interstate Commerce regulations. The Interstate Commerce regulations cover those things.

Q. Since when?

A. Since they have been in force.

Q. I am asking you how long they have been in force, as to the preservation of papers?

A. I do not recollect. I would like to tell you if I could, but I do not recollect. I am afraid to trust to my memory.

Q. Back to what period have you got all of your papers; what year?

A. They keep some of them indefinitely. Some of them they do not.

Q. You mean you keep important contracts?

A. We keep some papers; I would not like to say what they are; I don't know.

Q. You keep deeds, do you not?

A. I do not know. I suppose so. That is not under my supervision and does not come within my personal knowledge.

Q. You have not charge of all these papers?

A. No, sir.

Q. Well, now, take the papers of your department, and take them, say, six years ago. Are all the papers relating to the affairs of your department in your possession now, back, say, for six years?

A. I should think so. Perhaps not; there may be some papers which are destroyed after a shorter period than six years; I am not quite sure about that.

Q. Can you name any period since which you know that all the papers in your department have been kept?

A. I think we keep everything back for two years.

Q. Can you speak with any positiveness back of that?

A. I cannot speak with much positiveness on that subject at all.

Q. Relating to the papers, in case of an executed contract, where the purchase has been made and paid for and the article consumed and no claims arising out of it and no hold-over questions in respect of it, how long do you keep that character of paper?

A. Not longer than any of the others.

Q. Not more than two years?

A. Perhaps longer.

Q. What would you say?

A. I wish you would not ask me that, because I do not know.

Q. That is just what I want to find out, whether you do know or do not know.

A. The bills and evidences of that kind are kept longer than that.

Q. How much longer?

A. Maybe six years.

Q. You cannot say whether it is six years or not?

A. I do not remember; I do not know those regulations.

Q. Now, the bills on executed purchases in your department, covering a period of six years, would be an enormous bulk, would they not?

A. Yes, quite.

Q. Do you keep them in files accessible, or do you from time to time store them and put them away?

A. We store them and put them away.

Q. In warehouses?

A. In warehouses for the purpose.

Q. And after awhile even they are destroyed out of the warehouses?

A. Yes.

Q. That is absolutely necessary, is it not, with a great concern like yours?

A. Yes.

Q. You would have warehouse upon warehouse full of papers, would you not?

A. No.

Q. Wait a moment—if all the papers in regard to which the matters were at an end, and no questions were alive in regard to them, it would be an enormous quantity and bulk?

A. Yes.

Q. Well, now, take the papers which would be the basis of the tabulation given here in Defendants' Exhibit 119; that is the exhibit entitled "Statement showing tonnage of steel materials, 1901-1913." I suppose that means purchases?

A. Yes.

Q. By the Lines east of Pittsburgh?

A. Yes.

Q. During that period?

A. Yes.

Q. Now, do you know that any of those papers upon which this statement might rest for accuracy, back of the year 1908, are in existence, and if so, where are they?

A. I do not know whether they are or not, the original papers.

Q. They would constitute a very large bulk of papers, would they not, if they were in existence?

A. Yes, they would.

Q. And their examination would require a great deal of time and detail, would it not?

A. Yes.

Q. Well, now, how much time did you devote yourself, personally, to the preparation of this paper?

A. I didn't devote any.

Q. It was made by somebody else and furnished to you?

A. Yes.

Q. And you did not examine any of the records or any of the data or any of the original papers upon which this statement is made?

A. No, sir.

Q. And cannot yourself speak at all as to its accuracy?

A. Yes, I can speak as to its accuracy, in that I know that the people who prepare those things for me are thoroughly reliable and accurate. Then another thing, Judge, if you will allow me, of course if the original papers are destroyed, the information on them has been taken off before their destruction, and the records, summation, or analysis, or whatever it may be, is put down, and the figures are kept. We have complete records of such items as we buy, the amount of money we paid for them, and so on, for the length of time that the department has been—I was going to say in existence, but possibly not—but for all of that period, and longer.

Q. But you did not even examine them in preparation of this?

A. No, not in preparation of this.

Q. And that was all done by people you think are accurate, and on whom you rely?

A. Certainly.

Q. So your knowledge is confined purely to your reliance upon the accuracy of the work that was prepared and given to you by them?

A. Of course these people could testify themselves as to the accuracy.

Q. I was just asking you what you know.

A. Yes, sir.

Q. Did not the Pennsylvania Company control the Cambria Company and the Pennsylvania and Maryland Steel Companies?

A. I believe so. The Pennsylvania Company, you say?

Q. Yes.

A. You know the distinction between the Pennsylvania and——

Q. Yes, I know.

A. I cannot answer for those things any more than I can about some other things I have told you I don't know a great deal about.

Q. Well, is it not a fact that in your knowledge, from 1901 down to 1907, inclusive, the Pennsylvania lines east of Pittsburgh bought from the Carnegie Steel Company more rails than from any other company, than all other companies combined, leaving out the Cambria and the Pennsylvania and Maryland?

A. Won't that statement show that?

Q. I am asking you what you remember about it.

A. I do not remember personally. My recollection won't aid me.

Q. Can you name from memory what other companies during that period other than the Cambria, the Carnegie, the Pennsylvania and Maryland——

A. I do not recollect.

Q. If there were any others you cannot recall the names?

A. No, sir.

Q. Do you know whether they bought any from the Lackawanna?

A. I know we buy from the Lackawanna, but whether in that period or not I do not recollect.

Q. You have no recollection in regard to that?

A. No; I am not sure about it.

Q. This Defendants' Exhibit No. 120. What part did you have in the preparation of that?

A. No more than in the other. I had none at all, personally.

Q. And if I should address the same character of questions as to its preparation and your ability to speak as to its accuracy, your answer would be substantially the same?

A. Substantially the same.

Q. Did you, from time to time, in making these large purchases, have conferences with your officers, your superior officers?

A. Yes; we have from time to time; not always, but from time to time.

Q. From time to time during this whole period?

A. Yes, sir.

Q. What were the subject matters of these interviews, speaking generally?

A. Oh, the purchases that we make, sometimes on one and sometimes on another, never continuously on any one, probably sometimes on every one.

Q. Then there would be from time to time a great many such interviews as that occur?

A. Yes, sir.

Q. Did you carry in your mind the details of all these interviews?

A. No, sir.

Q. You would not pretend to do it, would you?

A. No, sir.

Q. What was said, or what you said?

A. No.

Q. You would not undertake to say?

A. Certainly not.

Q. Now, in the year 1901 have you any recollection as to

the names of the companies from whom during that year you bought sheets and plates, and also of the names of the companies that made bids during that year for sheets and plates, and the prices; do you carry any of that in your mind at all?

A. Only in a general way.

Q. Well, could you give the names?

A. In 1901?

Q. In 1901. From whom you made those purchases.

A. That is a long time ago. Of plates?

Q. For sheets and plates.

A. Sheets and plates. Of course in my mind there is a distinction between sheets and plates. Plates are heavier and sheets are thinner, and they are not always made by the same concern. Take plates in 1901, that is twelve years ago——

Q. Yes.

A. Why, we bought from such people as the Worth Brothers at Coatesville, the Lukens people at Coatesville. This is all Pennsylvania. The Central Iron & Steel Company in Harrisburg. Some people in Pittsburgh, probably. And we paid the current prices for them at that time. That is all I recollect about it.

Q. What do you mean, you paid current prices for them at that time?

A. The prices that were quoted us.

Q. Quoted how?

A. By letter and in response to our inquiries and in their efforts to get business from us.

Q. Do you say that you positively recall that you sold all of them that year?

A. What is that?

Q. Can you say positively that you recollect that you purchased during the year 1901 from all of those that you have named?

A. No. I think it is quite likely.

Q. You are speaking, then, of probabilities, and not of recollection?

A. On my recollection, yes.

Q. Well, on your recollection of what?

A. Of what you asked me; on our purchases in that year.

Q. I am just asking you now if you do recollect and can state positively those whom you purchased from that year, and if so to give the names.

A. I have given the names to the best of my recollection and ability.

Q. Now, your ability may not cover a positive recollection?

A. No.

Q. Are you not speaking just in a general way of the general method of dealing, and not a recollection of particular dealings and contracts?

A. Yes, I am speaking of particulars just as well as opinion——

Q. Of a period that far back?

A. Yes, of a period that far back.

Q. You have no recollection of prices?

A. Not as to the exact amount.

Q. Well, have you a recollection as to the prices that were made by the various bidders and how they differed; could you give any of them?

A. No.

Q. Could you give the variation, if any?

A. No.

Q. Do you recollect positively, and as a matter of positive memory that there were variations that year?

A. Yes, quite likely to be variations that year as well as any other year.

By Mr. Dickinson:

Q. Did you ever hear of a plate pool?

Mr. Reed: That is objected to as not cross examination.

A. Yes, sir; I have heard of plate pools.

Q. Did you ever hear of a plate pool that existed from 1901 to about 1905?

A. I expect I have. I think I have, doubtless.

Q. Do you know who the members of that pool were?

A. No.

Mr. Reed: This is objected to as not cross examination for the reason that the direct examination did not cover the period of 1901 to the end of 1904.

MR. DICKINSON: You may offer this paper, that is all. You mean as to conversations? I believe you are right. I believe you went back eight years.

MR. REED: Yes. Mr. Porcher did not testify that there was free competition in plate in 1901.

MR. DICKINSON: I think you are right about that, and if it were not for the time taken in changing the questions I would omit that from the record.

By MR. DICKINSON:

Q. Now, I come back to a period within the last eight years. That would bring it down to a period in 1905. Take the year 1905. Can you state as a matter of recollection from whom you bought sheets and plates and bars, structural material, axles, as well as splice bars and tie-plates?

A. I make the same statement about 1905 that I did about 1901.

Q. That is to say, you cannot name from positive recollection anyone from whom you purchased during that time?

A. Oh, yes, I can name those companies. I know that we purchased in that period those things.

Q. Do you know the proportion in which you purchased from them?

A. No.

Q. Do you know the prices at which you purchased from them?

A. No.

Q. Do you know the bids that were made by the several ones on any of the several purchases?

A. No, I do not have any recollection of those things. We have them all in our office, in the records.

Q. The records are not here. I am trying to show what you remember about it. What do you remember about it?

A. I have told you all I remember about it.

Q. How about the years 1907, 1908, 1909 and 1910?

A. The same thing for any of them.

Q. Just the same thing?

A. Yes, sir.

Q. Would that come down to 1911 also?

A. Yes, sir.

Q. I asked you as to 1901 about certain purchases. I am only referring to that because afterwards, in reference to 1905, your answer was of the same general character; and I note that, in speaking of those from whom you purchased sheets and plates, you did not mention the Carnegie.

A. I did not.

Q. Did you make no purchases from the Carnegie?

A. I do not know that we did. We have not bought for a long time, for a very long time, many plates from the Carnegie Steel Company.

Q. Since when have you bought from them?

A. I do not know. I should say probably not within that period; not since 1901.

Q. Do you mean since 1901?

A. Yes, sir.

Q. The Pennsylvania Railroad Company has not purchased any sheets and plates?

A. According to my recollection, which is—you know what my recollection is?

Q. No, I do not.

A. I mean, I cannot recall anything absolutely like that. I can tell you what we have bought from the Steel Corporation; some of the things we have bought from the Steel Corporation.

Q. Within the last eight years?

A. Yes, sir.

Q. From any subsidiaries of the Steel Corporation have you bought any sheets and plates?

A. Yes, sir.

Q. Have you bought any bars?

A. Yes, I think so.

Q. Have you bought any structural material?

A. Yes.

Q. Any axles?

A. Yes, indeed.

Q. Any splice bars?

A. Yes.

Q. And tie plates?

A. And tie plates. We have bought other things that are not on that list, too.

MR. REED: Such as what? If I may interrupt.

THE WITNESS: We have bought tubing, pipes, steel and iron piping.

MR. REED: And wire?

THE WITNESS: And wire.

MR. REED: And tin plate?

THE WITNESS: No, not much, if any.

By MR. DICKINSON:

Q. There is some question as to whether I asked you as to your recollection as to variations in prices in bids in 1905 and subsequent years. I understood you to say that you did not pretend to recollect that. Is that correct or not?

A. I recollect, as a fact, that there are always variations in such matters as those; there always have been variations in prices in the bids and prices quoted.

Q. But you cannot state what any of them are?

A. No.

Q. Nor the extent of the variations?

A. No, sir; they are slight.

MR. DICKINSON: That is all.

REDIRECT EXAMINATION

By MR. REED:

Q. Mr. Porcher, have you any recollection of any officer of the Pennsylvania Railroad Company attempting to influence you in your official actions in favor of the United States Steel Corporation or any of its subsidiaries?

A. Any officer attempting to influence us in favor of them in our purchases?

Q. Exactly.

A. No; they do not attempt to influence in that way in any respect.

Q. Do you think you would remember such an occurrence if it had taken place, as an officer of the company trying to influence you in the placing of your purchases in favor of a particular bidder?

A. I certainly would if it was against my inclination as to placing the purchase.

Q. And if they were to ask you to give preference to the Steel Corporation as against another bidder that had bid lower, do you think that you would remember such an occurrence as that?

A. Yes, I would, if that were the sole reason for their making such a request.

Q. That would be more or less an interference with the integrity of your office, would it not?

MR. DICKINSON: That is arguing with the witness, and I object to that.

By MR. REED:

Q. Is that so? Would you regard it as such?

A. Yes.

MR. DICKINSON: I object to the opinion of the witness on that.

By MR. REED:

Q. Mr. Porcher, who makes the purchases of steel supplies for what are known as the Lines West of Pittsburgh?

A. The purchasing agent of the Lines West of Pittsburgh.

Q. Do the different companies making up what are known as the Lines West of Pittsburgh have different purchasing agents, or does one man act for all of the Lines West, as they are called?

A. There is one purchasing agent for the Lines West, known as such. There are other lines, other roads in the West, that are affiliated and so forth that have different purchasing agents, three or four of them.

Q. Your office makes the purchases for the entire Pennsylvania Railroad proper, does it not?

A. East of Pittsburgh and Erie, yes.

Q. The Pennsylvania Railroad operates no lines west of Pittsburgh, does it?

A. The Pennsylvania Railroad Company owns the Pennsylvania Company that owns the Lines West.

Q. Yes, I understand that, and that has been proven in

this case; but the Pennsylvania Railroad Company, as an operating Company, actually operates no roads west of Pittsburgh and Erie?

A. No.

MR. REED: That is all.

RECROSS EXAMINATION

By MR. DICKINSON:

Q. Mr. Porcher, you were asked whether any officer of the company had tried to influence you in favor of making purchases from the Steel Corporation. Do you mean by that that there was no one who told you that, in making your purchases, they wanted you to give preference, or what do you mean by that? What do you understand by your answer, and what do you mean to say about it?

A. I mean by that that we are let alone very decidedly, and that the management takes the stand with us that we have to be let alone, and be allowed to do that kind of thing on our own initiative; and they do not let us into the secrets and inside workings of things, if there are any, simply for the purpose of having us independent of that kind of thing, I suppose, and letting us go our own way, as long as we do it honestly and intelligently; and I believe we have always done so, in the matters that are under our charge and control.

Q. I understood you to say that you did, from time to time, consult with some of your superior officers about large contracts and bids?

A. Yes.

Q. Something was said about the integrity of your office. If you consulted with your superiors, and they should advise you about the conduct of your office, do you mean to say you would regard that as an infringement of the integrity of your office?

A. Not at all; not at all.

Q. The very object of going there was to get their opinion and advice, was it not?

A. Yes; certainly. I wanted it.

Q. If all other things were equal, price and delivery and so forth, would you have regarded a suggestion that "we think this contract had better go this way, or might go that way," as an interference with the integrity of your office?

A. Not with the integrity of my office, no.

Q. Or with your free judgment, if all things were equal?

A. Not at all.

Q. You did not include that kind of thing in your general answer?

A. No, of course not.

Q. You say you do not remember all that transpired during all these many transactions during this period of years, and do not undertake to say what was said by you or them?

A. No, indeed.

MR. DICKINSON: That is all.

By MR. REED:

Q. When all those things are equal you prefer the United States Steel Corporation.

A. All things equal?

Q. Yes.

A. Well, I suppose—I haven't any preference; I try not to have any preference.

Q. Have you had any preference for the United States Steel Corporation in these past eight or nine years that you have testified about?

A. No preference; it is a large concern and in certain respects reliable. We like to deal with them in certain particulars; in others we do not.

Q. Has the fact that there were three directors common to both companies at one time, and two directors common to both companies at the present time, influenced the placing of your orders to any extent?

A. I think absolutely not.

By MR. DICKINSON:

Q. None so far as you know?

A. None whatever with my action, or the actions in our department.

Q. But if, during all these periods of various contracts in which you do not pretend to remember what transpired, there was any suggestion, all other things being equal, to have a contract go this way or that way, you do not know what may have influenced those who made those suggestions?

A. I would not always carry out their suggestions; if everything else was equal they left it entirely to me.

Q. You would not always carry it out; sometimes you would?

A. Very probably.

MR. REED: We offer in evidence Defendants' Exhibit No. 119, being a statement produced by Mr. Porcher, showing the tonnage of steel materials purchased by the Pennsylvania Railroad Company between 1901 and 1913—lines east of Pittsburgh.

MR. DICKINSON: That is objected to as incompetent, on the ground that it is secondary evidence, that it is not prepared by the witness, nor were the data upon which it is based examined by him, and the witness does not purport to speak of his own knowledge as to its accuracy.

(The paper referred to was thereupon marked "Defendants' Exhibit (Porcher), No. 119, October 29, 1913," and will be found in the volume of exhibits.)

MR. REED: We offer in evidence Defendants' Exhibit No. 120, being the statement entitled "Rail orders covering contracts with Pennsylvania Railroad Company, lines east of Pittsburgh."

MR. DICKINSON: We also object to this statement as incompetent, on the ground that it is secondary evidence, that it is not prepared by the witness, nor were the data upon which it is based examined by him, and the witness does not purport to speak of his own knowledge as to its accuracy.

(The paper referred to was thereupon marked "Defendants' Exhibit (Porcher) No. 120, October 29, 1913," and will be found in the volume of exhibits.)

HOWARD MARSHALL

was called as a witness on behalf of the defendants, and being first duly sworn, testified as follows:

DIRECT EXAMINATION

By Mr. Severance:

Q. Where do you live?

A. New York City.

Q. What is your business?

A. I am with the E. W. Bliss Company, of Brooklyn.

Q. What is the business of the E. W. Bliss Company?

A. We make a line of machinery for working metal, principally sheet metal; we make a line of cutting, shearing, punching, drawing, stamping, forging and special machinery, automatic machinery.

Q. Do you make other things, too?

A. Yes, we make projectiles, shrapnel.

Q. And torpedoes?

A. That is the special automatic machinery; I included that.

Q. This machinery that you make, this metal working machinery, is very heavy, is it not?

A. Well, some runs very light. Some of it may be considered to come under the Government regulations of machine tools; I am not quite sure about that. I do not know what those regulations are, but we always consider our machinery as special machinery, not otherwise specified.

Q. I mean, it is heavy?

A. Some of it is light. The light tools do not weigh over 40 or 50 pounds, some of them, and others, again, weigh a good many thousand pounds.

Q. That is what I meant by heavy machinery.

A. Yes; we make some.

Q. Now, in manufacturing these products are you purchasers of steel of different kinds?

A. Yes, we purchase bars, billets, plates and some sheets.

Q. How long have you been connected with the E. W. Bliss Company?

A. Well, as purchasing agent, you mean?

Q. You are now purchasing agent?

A. Yes.

Q. How long have you been purchasing agent?

A. I have been purchasing agent since July, 1911. I was in the same department about two years and a half before that, and the rest of my time, the rest of the ten years, I was in the machine shop the most of the time.

Q. Well, what was your position previous to being purchasing agent; you say you were in that department. What was it?

A. Assistant purchasing agent.

Q. Then you have been either purchasing agent or assistant purchasing agent for about five years last past?

A. Yes, sir.

Q. During that time has the method of making purchases and the prices at which different steel products have been bought been known to you?

A. Yes, sir.

Q. What are your annual requirements of steel?

A. About 5,000 or 6,000 tons; about 5,600 tons, I should say; between 5,000 and 6,000 tons.

MR. DICKINSON: Does that mean all of the steel?

THE WITNESS: Yes, all except the castings, of course.

By MR. SEVERANCE:

Q. You have mentioned bars, plates, billets and some sheets as the classes of steel products that you bought?

A. Yes, and tubes. I forgot tubes; but you do not compete for them.

Q. No; but that is a very small item, is it not?

A. No, it is a very large one. They are a special tube that you do not make. You are not equipped to make them.

Q. You mean by "you" the United States Steel Corporation don't make them?

A. Yes, sir.

Q. Then this other steel material that you mentioned, bars, plates, billets and sheets, are of the classes that are made by some of the subsidiaries of the Steel Corporation; is that right?

A. Yes.

Q. Will you state from whom you have purchased your supplies of these different items during the last five years when you have been either assistant purchasing agent or purchasing agent of E. W. Bliss Company?

A. Oh, we have purchased from Carnegie, Crucible, Alan Wood, Heppenstall, Pittsburgh and Bridgeport, too. The Camden Forge and Cambria Steel Company, and Tioga Steel.

By Mr. Severance:

Q. Where is the Tioga Steel?

A. Near Philadelphia somewhere. The Philadelphia Steel Forge; Carbon Steel Company; Jones & Laughlin.

Q. Have you bought anything from the Bethlehem?

A. Bethlehem, yes.

Q. Have you bought anything from Lackawanna?

A. Yes, and from several in Pittsburgh.

Q. Have you bought any from Gautier?

A. Gautier is the Philadelphia Steel Forge.

Q. Have you bought anything from N. & G. Taylor?

A. Some slabs, yes.

Q. Now, Mr. Marshall, in making your purchases of these different lines of steel products, what method do you pursue?

A. Well, they are all purchased on a competitive basis.

Q. In what way do you secure that competition?

A. We send our regular inquiries, stating the amount of the steel and the analysis that we require, and the size, and how we would like to have it come, forged or rolled, if there should be any preference. Bids are placed on a strictly competitive basis of price.

Q. Are you called on at times by the agents of the different steel mills?

A. Yes, I have at least three every day over there, I guess; maybe sometimes more.

Q. Is that an unusual thing?

A. No, it is not. Oftentimes there are agents, you know, New York agents, too. Some seasons of the year I have more than others, according, I guess, to how much business they have. There is about an average of three a day.

Q. What are they over there for?

A. Oh, to see if they can get any business, I suppose.

Q. You stated that you received these bids from the different mills when you have steel to purchase. What has been your experience during the period you stated with reference to those bids, whether they have been uniform or varying?

A. They have been very irregular. all kinds of prices; as much variation as from five cents a hundred to a cent a pound on the same material.

Q. On the same order?

A. On the same order.

Q. That is, bidding on the same tonnage?

A. Yes, sir.

Q. Has that been the case during the whole period, that there has been variation? I do not mean the same amount of variation, but have there been variations?

A. There have been variations in the five years that I have been there.

Q. Between the different mills on the same tonnage?

A. Yes.

Q. From whom do you buy the most of your sheets?

A. Well, until about a year ago it was pretty well divided; sometimes we got them from the American Sheet & Tin Plate Company and sometimes from Alan Wood; as a rule from Alan Wood.

Q. How has it been the last year?

A. The last year altogether Alan Wood.

There were times there in 1909 when we bought it through a jobber in New York. It was an undesirable kind of tonnage, and we could place it to better advantage through them.

Q. When have you bought, if at all, from the Carnegie? I think you said you had bought some from the Carnegie; when have you bought from the Carnegie Steel Company?

A. We bought very little from them.

MR. DICKINSON: You are speaking of sheets now?

THE WITNESS: No; bought very little from Carnegie until the last two and a half years.

By MR. SEVERANCE:

Q. What classes of steel have you bought from Carnegie during the last two and a half years?

A. Bars and billets; some billets.

Q. During that period have you purchased any bars and billets from others?

A. Yes.

Q. The Carnegie have not filled all your requirements?

A. No, indeed. We had about 3,800 tons that we placed and Carnegie received about 1,100 tons.

Q. How has the balance of that tonnage been distributed; to what companies?

A. Why, Bethlehem and Crucible.

MR. DICKINSON: Excuse me; that 3,800 tons means a year?

THE WITNESS: Yes, sir; a year.

MR. DICKINSON: Because the period asked for had been two and a half years, but you mean a year?

THE WITNESS: Yes, sir. What was the question?

By MR. SEVERANCE:

Q. I asked you what other companies supplied the balance of your requirements. You stated you had given about 1,100 out of 3,800 to Carnegie.

A. There was Bethlehem and Crucible and Philadelphia Steel Forge, Tioga, Camden, Cambria.

Q. That is, the bulk of it came from those?

A. Yes, sir.

Q. And when you say 1,100 out of 3,800, are those absolute figures or approximate figures?

A. Those are as near as I can come to it in looking over the records roughly.

Q. Now, you say that that is within the last two and a half years?

A. Yes, sir.

Q. Previous to two and a half years ago, did you buy any of your bars and billets from Carnegie?

A. Why, we had one contract with Carnegie for about 100 tons; I think it was in 1906. Then we had later, about 1908, another contract with them for a couple of hundred tons.

Q. 200 tons?

A. It was not over that; it might have been a little less.

Q. This 100 tons in 1906 was before you became purchasing agent or assistant purchasing agent?

A. Yes.

Q. How did you find out about that?

A. I looked it up.

Q. How did it happen that up to two and a half years ago Carnegie got no substantial tonnage in that line from you? What was the reason?

A. We had lower prices.

Q. From other people?

A. Yes, sir.

Q. Has or has not the tonnage that has been secured by Carnegie in the past two and a half years been secured on a competitive basis against others?

A. It has.

Q. You mentioned your sheets and your bars and billets. Now, you also spoke of plates; from whom have you bought plates during the past five years?

A. For the first two and a half years before I was purchasing agent we used an iron plate for the same purpose as we now use the steel plate.

Q. From whom did you buy that?

A. The iron plate was bought, as a rule, from the Burden Iron Company.

Q. Of Troy, New York?

A. In New York some place; Troy, I think. We now use a steel plate and buy it from the Carnegie Steel Company.

Q. Have you bought plates during that period from any other steel company?

A. Not more than one or two. They were not competitive at all, those plates. The plates that I did buy were just picked up from New York stock.

Q. Did you make your purchases of plates on a competitive basis, the same as your other purchases?

A. No, sir.

Q. You mean that you did not get bids on the prices?

A. No, sir.

Q. What governed you in placing your orders for plates?

A. Why, they had to be particularly adapted for the class

of work we were doing in that line. I have tried several other single plates from other companies, but they were not as well adapted for the purpose.

Q. Then you placed your orders with Carnegie because they made the best plate for your purpose?

A. Yes, sir.

Q. How large a tonnage is that per annum?

A. Not over 50 tons; probably about 25. Between 25 and 50 tons.

Q. Are they a special kind of plate?

A. Yes; they are a special plate.

CROSS EXAMINATION

By Mr. Dickinson:

Q. You say your plates were of a special character and those you did not buy on a competitive basis at all in the last two and a half years; and before that you got an iron plate?

A. Yes, sir.

Q. You spoke of purchasing from the Crucible Steel Company?

A. Yes.

Q. They made a special kind of steel, did they not?

A. The Crucible?

Q. Yes, the Crucible.

A. How do you mean special?

Q. Do they not make what is called crucible steel?

A. That does not matter to us, how they make it.

Q. You did buy crucible steel from them, did you?

A. If that is the way they make it that is the way we bought it. I don't know. I did not ask them how they made it.

Q. You do not know the difference?

A. I suppose they are made in a crucible; but it made no difference for our line of work, whether they were made in an open hearth or crucible furnace.

Q. Do you know the difference between crucible steel and the other kinds of steel?

A. One is made in a crucible and the other in open hearth.

Q. But do you know the differences in qualities, if there are any?

A. There is no difference so far as our line is concerned.

Q. What did you buy from the Crucible Steel Company?

A. We bought a few plates; not many.

Q. What years? Just state the years you bought since you have been purchasing agent and assistant purchasing agent.

A. What years?

Q. From the Crucible Steel Company; what you bought from them and the years you bought it from them.

A. Well, we bought plates from them.

Q. Go on and give the year.

A. For two and a half years before July, 1911.

Q. What quantities?

A. Soft steel plates; never more than a carload at a time, and generally about five or six tons.

Q. What other concerns did you buy the same character of plates from during those years that you bought from the Crucible Steel Company?

A. The Carbon Steel Company.

Q. Who else?

A. That is all.

Q. Just those two?

A. That is all.

Q. How came you to buy from those two alone?

A. Well, sometimes deliveries were not favorable from other people.

Q. Was that a special character of steel adapted for your business; made by those two concerns?

A. Nothing any more special than what anybody else could make; I mean anybody that is in the plate business.

Q. What quantity of that character of plate that you bought five years ago from the Crucible Steel Company at times did you buy, and from whom did you buy it?

A. It would not be over about 40 tons.

Q. Forty tons?

A. Per year.

Q. For that year. How would it be for the subsequent years?

A. The years since then I do not think there has been quite as much.

Q. So that it was never over forty or fifty tons in any year?

A. No, sir.

Q. And that is the only thing you bought from the Crucible Steel Company?

A. No, sir.

Q. What else did you buy from them?

A. We bought bars; soft steel bars.

Q. Did you buy any bars from them five years ago?

A. Yes, sir.

Q. What quantity?

A. I cannot tell you the exact quantity.

Q. Do you know the prices you paid five years ago?

A. No, sir; I cannot tell you anything about that.

Q. Did you buy from the Crucible Steel under contract, or just as you needed it from time to time?

A. From the Crucible we always bought just as we needed it.

Q. You never had any contract with them during the five years?

A. We had a contract with them one year.

Q. What year was that?

A. We had a contract with the Crucible in 1909.

Q. How much did that cover?

A. It was only for about 200 tons.

Q. Of what?

A. Of steel bars.

Q. At what price?

A. I don't know.

Q. You don't know the price?

A. No.

Q. Can you approximate the price?

A. No, sir.

Q. At what time did you make these purchases? At what

time of the year, was it all in one purchase or several purchases, that 200 tons?

A. It was all in one purchase.

Q. What time of the year was it?

A. I cannot tell you that.

Q. What do you remember in connection with your purchases other than the fact that you bought 200 tons from them that year in bars?

A. Only that they were the lowest bidders.

Q. And you do not know what the price was?

A. No.

Q. And you do not know who the other bidders were on that particular purchase?

A. No.

Q. Do you know what the other people bid?

A. No, sir.

Q. Can you give any statement about it at all as to what they bid?

A. No.

Q. Can you approximate the price of what you paid per ton for that?

A. Not in 1909.

Q. Can you tell within $2 positively?

A. No, sir; I would not want to say.

Q. How near can you come, if at all, to giving the price, where you are sure that you are within safe limits.

MR. SEVERANCE: You mean on that particular purchase?

MR. DICKINSON: Yes.

THE WITNESS: If you want that price I think I can get it for you.

By MR. DICKINSON:

Q. I suppose I could get it in some other way if I wanted it, but I want to know what you know about it.

A. I could not tell.

Q. Could you come within $5 a ton of it?

A. No; I have no idea what it is.

Q. Now, have you got any contract this year with the Car-

negie Steel Company, or any of the subsidiaries of the Corporation?

A. No.

Q. For no kind of purchase?

A. No.

Q. Have you purchased any from them this year?

A. Yes.

Q. From whom?

A. Carnegie.

Q. What have you purchased?

A. We have purchased bars, that is all.

Q. What quantity?

A. This year about 900 tons, I guess.

Q. Was that made at one time?

A. No.

Q. Several times?

A. That stretched along during the entire year.

Q. Well, give me some idea of what you mean by stretching along the entire year; how many purchases were there within that, how many separate transactions?

A. Perhaps a hundred.

Q. Perhaps a hundred. Do you know that there were as many as fifty?

A. Yes; I will swear there were more than fifty.

Q. That is all within the year 1913?

A. Yes.

Q. How many tons did you say it was?

A. About 900 to 1,000.

Q. Did you buy any of that same kind from anybody else during that time?

A. Yes.

Q. From whom?

A. We bought from the Bethlehem.

Q. How much did you buy from the Bethlehem?

A. I should say about 500 or 600 tons.

Q. Was that in one or various transactions?

A. That was in about three or four transactions.

Q. So that was in three or four, and the one with Car-

negie was somewhere between fifty and one hundred transactions?

A. Yes.

Q. Who else did you buy from of that same character of material this year, other than Carnegie and Bethlehem?

A. Well, I bought from Tioga.

Q. We will take that first. How much did you buy from them?

A. Well, I do not know; those are smaller amounts.

Q. Was it in one purchase, or several purchases?

A. No, I do not know; it is more than one, but I do not know how many.

Q. Are there any others?

A. Yes, we bought from Camden, more than once.

Q. How many times?

A. More than once, but I do not know how many times; and Cambria, too.

Q. Take these fifty or one hundred transactions with Carnegie, whatever it was, between those limits, where you have made purchases this year, do you recall anything about the dates of those purchases, from memory? You are looking at a memorandum, are you not?

A. Yes.

Q. Just leave that alone.

MR. SEVERANCE: I do not know why he should be directed to leave a memorandum alone.

MR. DICKINSON: I think so; I am cross examining him and I did not call for his memorandum.

MR. SEVERANCE: But you are testing his memory, and he has a memorandum.

THE WITNESS: I do not know.

By MR. DICKINSON:

Q. What recollection have you with regard to the times of these various transactions, the prices that were bid, the prices for each, and who the bidders were on each, and what prices were made by the various bidders? I mean these transactions covering the sales of the Carnegie this year, or purchases from Carnegie this year.

A. I would not say this year, but if you asked me for last year or two years before that——

Q. (Interposing) I am not asking for last year; I will come to that in a little while.

A. I could not tell.

Q. You cannot give me any information on that subject for this year; is that correct?

A. Yes.

Q. Now, take last year; what did you buy under contract, if any, last year, running over a period of time?

MR. SEVERANCE: 1912?

MR. DICKINSON: Yes.

THE WITNESS: In 1912 we bought about 1100 tons from Carnegie.

By MR. DICKINSON:

Q. Of what?

A. Bars and billets.

Q. How much did you buy altogether, from others?

A. We bought five to six thousand tons.

MR. SEVERANCE: Altogether, you mean?

THE WITNESS: Altogether.

By MR. DICKINSON:

Q. For the year 1912?

A. Yes.

Q. And 1,100 tons of that was from Carnegie?

A. Yes, sir; and about 3,800 tons was tonnage that the Carnegie Company competed for.

Q. 3,800 they competed for?

A. Out of the 6,000; yes.

Q. They competed for?

A. Yes.

Q. Well, they did not compete for all your tonnage?

A. No, sir.

Q. You mean they did not give you bids?

A. We did not ask them for bids.

Q. You did not ask them for bids?

A. No, sir.

Q. Now, on that 3,800 tonnage that you say they competed for, out of which they got 1,100, was that 1,100 tons covered by a contract?

A. No, sir.

Q. Were any of your purchases for that year covered by written contracts, and if so, with whom?

A. No, sir; I never made any contracts.

Q. You never made any contracts running over any period of time?

A. No, sir.

Q. How were your purchases made, just as your necessities required, and are they largely emergency purchases?

A. They are not emergency purchases, no, but as I needed it.

Q. Well, you do not make an estimate, then, do you, of what your needs will probably be for a year?

A. No.

Q. Wait a minute—and then take bids covering that approximate estimate, and then rely upon other purchases for making up what the surplus may be?

A. No.

Q. But it is all from time to time as your needs arise?

A. Yes, sir.

Q. Well, some of these needs, do they develop more suddenly than others?

A. Why, yes.

Q. And at such times do you make quicker purchases than you do at others?

A. Sometimes.

Q. Do you ever make them from agents that happen to come in and make a price that seems to you to be favorable and then you close with them on that?

A. No.

Q. Can you state from whom on these 3,800 ton purchases for the year 1912 in which the Carnegie competed, you got bids?

A. Do you mind if I look at this memorandum?

Q. I do not want you to look at the memorandum; I want you to state, if you know.

A. Why, we got bids from Heppenstall, Carnegie, Philadelphia Steel Forge, Cambria, Carbon. Those are the ones that I know. There may be others—and Bethlehem.

Q. Did you get bids from various ones at different times, or did you get from all of them all the times, covering those 3,800 tons, of which Carnegie got 1,100?

A. No, not necessarily all of them all the time; there were always at least four.

Q. Can you give the bids of the unsuccessful bidders?

A. Not without looking at the memorandum.

Q. I mean can you tell it from your memory?

A. No.

MR. SEVERANCE: Let him look at it. You want the facts, don't you?

MR. DICKINSON: Yes, but I choose to get them in my own way, and I am not going to have him use a memorandum that is made up just for the purpose of this case. I don't know how he made it.

MR. SEVERANCE: You can ask him; he will tell you.

MR. DICKINSON: I cannot take his memorandum, made up at the suggestion of the other side, forced on me, and I do not propose to have it done.

MR. SEVERANCE: We will see about it.

MR. DICKINSON: You can bring it out, if you want to, and then we will except to it, but I do not propose to use his memorandum.

By MR. DICKINSON:

Q. I am asking what you remember as to bids during 1912 on those contracts, of various bidders.

A. I remember there was a great variety of bids. I remember that we had bids on the same class of steel anywhere from $1.65 delivered Brooklyn to $2.15 delivered Brooklyn, on the same class of steel.

MR. SEVERANCE: That is $1.65 what, a hundred?

THE WITNESS: A hundred; yes, sir.

By MR. DICKINSON:

Q. Can you designate, and if so, please designate, any one

of those particular transactions where you can remember the bids, and state the time and who the bidders were, and what their bids were, if you can.

A. Not offhand, no.

Q. Can you give it in regard to any one of them?

A. No, not offhand.

Q. You can take time to think, if you want to; I do not want to hurry you about it. Can you think and do it? If you can, I will wait on you.

THE WITNESS: It is pretty hard——

Q. Now, take the year 1911: Did you have any contract from the Carnegie that year?

A. Yes, sir.

Q. Do you know the prices at which you purchased from them?

A. No, sir.

Q. How much did you purchase from them, in tonnage?

A. About 1,000 tons.

Q. Was that in one transaction or several transactions?

A. Several transactions.

Q. Can you give times of the year approximately when those were made?

A. At all times.

Q. How many different transactions?

A. I don't know.

Q. Could you approximate the number?

A. No, sir.

Q. Can you give in respect of any of those transactions the prices that were made on those particular transactions by other bidders than the Carnegie?

A. No, sir.

Q. Can you give any approximation of it?

A. Prices varied about the same as I said, from 1912.

Q. But I am asking you if you can give any approximation; if so, just state what they were and who made them.

A. No, sir.

Q. What kind of bars were these that you bought?

A. Ordinary carbon open hearth steel bars.

Q. Were they a special character of bar, adapted to your business, or were they standard bars that are usually sold in the trade?

A. Regular bars.

Q. Were not they soft steel bars?

A. Carbon steel; some of them were soft, some of them may not have been so soft.

Q. Well, now, take the year 1911: What was the maximum you paid per ton for those bars?

A. The total amount, you mean?

Q. No, per ton. What was the highest price you paid per ton for those bars in 1911?

A. That I do not know.

Q. 1912?

A. I do not know.

Q. 1913?

A. I do not know.

Q. Do you know for any year within the last five years the market price, the base price, for steel bars, ordinary steel bars?

A. Well, I would not say that there was any market price from the bids I received.

Q. Do you know of any price that you paid?

A. No.

Q. Do you know about the quoted prices for bars in the trade papers such as the Iron Age?

A. I do not pay any attention to the Iron Age or any trade papers. I get my bids.

Q. You do not know the current prices from time to time?

A. I may read over some of the trade papers, but I don't pay any attention to that.

Q. You do not pay any attention to that?

A. No, sir.

Q. Are your sizes of bars quoted in the Iron Age, the sizes that you use, at all?

A. What do you mean? The sizes of bars?

Q. I mean the sizes of bars you use in your business.

A. We use ordinary bars that everybody rolls.

Q. Do you not have a chemical analysis somewhat differ-

ent from the ordinary bar that is quoted in the Iron Age, for which the base prices are given, or do you know?

A. They are the ordinary specifications. That is all I know.

Q. What are the specifications? Do you make the specifications?

A. Some of our bars run 15 to 25 in carbon; some of them 35 to 45 or 65 to 75, or 85 to 95, some of them.

Q. And you make your specifications?

A. I make the specifications, yes. We generally use a manganese for soft bars about 40 to 60, or something like that.

Q. And you use various sizes with these various specifications, do you not?

A. Various sizes, yes. The majority of our tonnage runs from four inch up to ten inch.

Q. Do you purchase any forged products?

A. Yes.

Q. What?

A. We purchase crank shafts, and we purchase forged tubes.

Q. Was any of that included in any of this tonnage you have given?

A. Shafts are not included in the 6,000 tons. The tubes are.

MR. SEVERANCE: But not in the 3,800?

THE WITNESS: No; not in the 3,800.

By MR. DICKINSON:

Q. From whom did you get your tubes this last year?

A. The Bethlehem Steel Company.

Q. For the year before that?

A. For the last five years—in fact, ever since about 1901. I think.

Q. You have got them from the Bethlehem Company?

A. Yes.

Q. And nowhere else?

A. From nobody else.

Q. Was that because they were made just——

A. They are equipped to make them; that is why.

Q. They are equipped to make them, and you dealt with them, and with no other persons?

A. Yes.

Q. What bids, then, did you take on those?

A. Before 1901?

Q. No; I mean since 1901?

A. None.

Q. None at all?

A. None at all.

Q. So you bought those without competition?

A. Without competition.

Q. Take the year 1911: What was the lowest price per ton you paid for bars?

A. Oh, I don't know.

Q. Approximately?

A. I do not know it approximately. I would not say.

Q. Do you know the highest you paid for that year, approximately?

A. No, sir.

Q. Can you tell within $5 a ton?

A. For 1911 I should say about the lowest—no, I would not say.

Q. Can you come within $5 a ton of it?

A. No, sir; I would not try.

Q. Could you do it for any year?

A. No; I would not try.

MR. DICKINSON: That is all.

REDIRECT EXAMINATION

By MR. SEVERANCE:

Q. Have you any memorandum that you have taken from your books showing the bids made you on bars?

A. I have, sir.

Q. For what year?

A. For the years 1911 and 1912.

Q. Can you state how those bids range by refreshing your recollection by the use of that memorandum?

A. Yes.

Q. Will you kindly do so?

MR. DICKINSON: This is objected to on the ground that the witness has stated that he has no recollection whatever, that this memorandum is secondary, made from data and from books not shown and not produced in evidence, and is therefore incompetent.

THE WITNESS: It is made from the original quotations, and I have them right in my coat there, if you would like to see them.

By MR. SEVERANCE:

Q. Just produce the quotations for Judge Dickinson's inspection, please.

(The witness produced certain papers.)

Q. What years are there? You are speaking of 1911, now?

MR. DICKINSON: He said 1911 and 1912.

MR. SEVERANCE: Give us those for 1911.

MR. DICKINSON: He said he produced them for my inspection. Let me see them, please.

MR. SEVERANCE: Yes. Let the Judge look at them. The record will show that these papers are handed to counsel for the Government for their inspection.

MR. DICKINSON: Are you going to examine him on these?

MR. SEVERANCE: I am just going to have him state a few figures by using his memorandum to refresh his recollection, the memorandum he made up from these original sources.

(Whereupon a recess was taken until 2 o'clock p. m.)

AFTER RECESS.

HOWARD MARSHALL,

the witness under examination at the taking of recess, resumed the stand.

RECROSS EXAMINATION

By MR. DICKINSON:

Q. These papers referred to, as produced by you, are only for contracts made in the year 1911 and 1912, are they?

A. Yes.

Q. Please look at that and state how many transactions they represent in 1911, and how many in 1912, and the dates. You are looking at your memorandum; do not get that mixed up with what we are talking about.

A. October, 1911.

Q. That refers to one transaction?

A. October. Well, the dates varied.

Q. The date of your solicitation for bids?

A. The 21st of October.

MR. SEVERANCE: Do you mind letting him tell the dates under which the answers came in?

MR. DICKINSON: I am perfectly willing to do that. That is one thing I was going to ask him.

By MR. DICKINSON:

Q. How many answers did you have to that? From whom were they and what were the dates?

A. Bethlehem, October 25th.

MR. SEVERANCE: You have answered that part. Now give that next name.

THE WITNESS: Alan Wood Iron & Steel Company, October 27. Carnegie Steel Company, October 23rd. Cambria Steel Company, October 27. Heppenstall Forge Company, October 26. And this is a duplicate from Alan Wood; he made a mistake in his first bid and corrected it.

MR. SEVERANCE: Under what date?

THE WITNESS: October 25th, and he followed it up on the 27th.

MR. DICKINSON: And corrected one of the items?

THE WITNESS: It is just a slip on the stenographer's part; you can see it.

By MR. DICKINSON:

Q. Any others?

A. A Milne; they were quoting on some British bars.

MR. SEVERANCE: What date?

THE WITNESS: October 23rd, and November 8.

MR. DICKINSON: How much was involved in that amount which you solicited bids on?

THE WITNESS: 250 tons.

By Mr. Dickinson:

Q. Of what?

A. Round bars .28 to .38 carbon, aiming at .30 to .35, manganese .40 to .70, phosphorus and sulphur not over .04, regular lengths.

Mr. Severance: Do you want to go on with your examination about this?

Mr. Dickinson: Yes, I do.

By Mr. Dickinson:

Q. Is not .04 phosphorus and sulphur below the standard specifications upon which the Carnegie and the other companies ordinarily quote?

A. Well, we never had to pay any more money for it.

Q. You are not answering my question.

A. It is not the specification they generally put on their quotations. On the ordinary machine bars I believe they generally quote .05.

Mr. Severance: What is .05?

The Witness: In phosphorus and sulphur.

By Mr. Dickinson:

Q. Now, do the Carnegie Company in their regular specifications quote below .05 sulphur and phosphorus?

A. They have.

Q. At times they have? My question was, the regular standard specification.

A. I do not think it is regularly on their sheets, regularly on their form.

Q. What is?

A. .04 and under; it is .05 and under, as I believe.

Q. Do you not at times, when you call for .04 and under in phosphorus and sulphur, from Carnegie, get a statement that if you change that specification they will quote you a price?

A. Sometimes; to change it to .05.

Q. What is the next transaction in these papers that you have there; give the date of your proposal and the specifications and the amount, and those from whom you got bids.

A. There is one for fifty tons, October 9th. This was before that.

Q. What year?

A. 1911, by inquiry of the 6th.

Q. Your inquiry was what?

A. Of the 6th of October, 1911. There are only three quotations that I have here. There may be more, but I did not look any further.

Q. Who are they from?

A. One of them is from the Pennsylvania Steel Company, one of them is from the Carnegie Steel Company, and one of them from the Carbon Steel Company.

Q. What were your specifications there? What were you calling for there; what was it for?

A. Either rolled or forged stock.

Q. What were your specifications?

A. Carnegie quoted both ways on the 9th; Carbon quoted on the 10th, forged; Pennsylvania Steel Company quoted on the 19th.

MR. SEVERANCE: Forged or rolled?

THE WITNESS: Forged.

By MR. DICKINSON:

Q. What were your specifications there?

A. The specifications called for either rolled or forged, .15 to .25 carbon, aiming about .18; manganese ordinary .40 to .70; phosphorus and sulphur—they did not mention what it was, but Carnegie quoted on it on this occasion .04 or under.

Q. You mean your specifications did not mention it?

A. No, they did not seem to. I have not got the original specification, but none of the bidders specified—I do not know what the specifications called for; it must have been under .04 or they would not have bid on them.

Q. What was the highest price you got there?

A. The highest bid was 2½ cents. The next one was 2.45. The next one was 2.41, and the next one was rolled stock; I guess if you average it it would be about 1.81.

MR. SEVERANCE: The other three were forged, were they?
THE WITNESS: Forged.

By MR. DICKINSON:

Q. Some of these bids were on forged and some were on both?

A. Yes, sir; they could quote either way they wanted to.

Q. Carnegie quoted on both, did it?

A. They quoted both ways.

Q. The same price?

A. No, different prices, 2.41 and 1.81.

Q. What was the 1.81 on?

A. Rolled.

Q. Were those deliveries at the same place at those prices?

A. Yes, all delivered Brooklyn.

Q. All of them?

A. Yes—no, I am wrong about it; the Carbon Steel Company was Pittsburgh.

Q. What was the Carbon?

A. The Carbon was October 10th.

Q. No, the amount.

A. The amount was 2.50.

Q. Give the sizes.

A. The sizes were 5 7/16, 5 13/16. They quoted hammered rounds. Five tons at 5 7/16; ten tons 5 13/16; ten tons 6 1/8; five tons, 6 7/16; ten tons 6 13/16; ten tons 7 1/8.

Q. Now, you say that was on hammered rounds?

A. Hammered rounds.

Q. Was that in your specification?

A. No, that is what they quoted on; they could quote either hammered rounds or they could quote rolled stock or in any way.

Q. Did your specification call for particular kinds?

A. No, it said rolled or hammered.

Q. Your specification did?

A. Yes, sir.

Q. Then that was in your specification, was it?

A. It was in there.

Q. I thought I asked you whether it was, and you said it was not. Now you say it was there.

A. It was in both ways.

Q. If it was in both ways, then it was one of the ways, wasn't it?

A. Surely.

Q. What is your next transaction among these papers that you produce?

A. The next one, Carnegie was not a bidder on that; they did not bid.

Q. Give me the date.

A. The next one was January 3rd.

Q. What year?

A. 1912.

Q. What did it call for; how many pounds, and what?

A. It called for 3,500 billets, first class steel billets.

Q. Is that the only specification?

A. 75 to 80 carbon; manganese 55 to 75; phosphorus and sulphur not over .03.

MR. SEVERANCE: How much does a billet weigh?

THE WITNESS: The billets were about 127 to 130 pounds.

By MR. DICKINSON:

Q. Does the Carnegie quote regularly upon phosphorus not over .03?

A. No.

Q. How many bids did you get on that?

A. I have five here.

Q. Who were they from, and give the dates.

A. The Bethlehem Steel Company, January 3rd.

Q. 1912, isn't it?

A. 1912. I will have to change that date of my sending this quotation out to the 13th of December, 1911, when it was sent out.

Q. Then you want to go back and change that, do you?

A. Yes, sir; I got it January 3rd, the date the Bethlehem came in; and Tioga, received their bid on December 14th; Camden Forge Company, received their bid on the 22nd of

December; Crucible Steel Company, received their bid on the 16th of December.

Q. Well, when did you say those bids were solicited?

A. I told you I think it was the 12th of December—no, it was the 13th of December.

Q. When was that contract awarded?

A. It was awarded on the 4th day of January, 1912.

MR. SEVERANCE: Had you finished with your list of bidders?

THE WITNESS: Yes; I think they are all there.

By MR. DICKINSON:

Q. Did you ever know Carnegie to quote below .03 on phosphorus and sulphur?

A. No, sir.

Q. What was your next transaction shown by those papers? Give the date of solicitation, the amount, the bidders, and when they gave their bids.

A. Here is one; I have not got the date I sent it out.

Q. What month was it?

A. It was in December, 1911.

Q. What was it for? What did it call for?

A. There were two classes of analyses here; one was for 8-inch round steel, .70 to .80 in carbon; the other was for 8⅛-inch round steel, .28 to .38 in carbon.

Crucible Steel Company quoted on the 6th of December.

Q. Does that show the phosphorus there?

A. Phosphorus and sulphur .03 on the 8-inch and .04 on the 8⅛-inch.

Q. Who bid on that?

A. The Crucible Steel Company——

Q. Have you given the tonnage?

A. There was, I should say, about 25 to 30 tons; about 30 tons.

Q. Who were the bidders, and the dates?

A. The Crucible Steel Company bid on the 6th of December. They bid on hammered bars, smooth forged. They bid 3¾ cents a pound on the 8-inch round; 3½ cents on the 8⅛-inch. That was the price at the mill.

MR. COLTON: What was the other one; delivered?

THE WITNESS: Both prices at the mill.

MR. SEVERANCE: Where is the mill?

THE WITNESS: This mill is in Harrison.

MR. SEVERANCE: Harrison, New Jersey?

THE WITNESS: Yes.

MR. SEVERANCE: South of Newark?

THE WITNESS: Yes.

The Camden Forge Company sent their bid in on the 5th of December, and they bid 2.35 cents Brooklyn on the 8-inch stock and 1.85 cents on the 8⅛-inch stock.

By MR. DICKINSON:

Q. Delivered where?

A. Delivered Brooklyn.

The Carnegie Steel Company quoted on December 4, 1911: On the first item, the 8-inch round, they asked me if I could change the specifications to read .04 sulphur instead of .03.

MR. COLTON: Is there not another change there?

THE WITNESS: No; that is all. Phosphorus and sulphur .04 instead of .03, and on the 8⅛-inch round that was all right; they quoted on that.

MR. SEVERANCE: I would like to have the witness read that footnote into the record.

By MR. DICKINSON:

Q. I notice on this undated solicitation the words, in blue pencil: "Change to 68 to 83, F. C. B. Page," or something. What does that mean?

A. They probably wanted a couple more points in carbon. They may have wanted 15 points.

MR. SEVERANCE: Who made that notation?

THE WITNESS: 70 to 80. I did that myself.

By MR. DICKINSON:

Q. When did you make that? After you sent it out?

A. After I received the bids.

Q. After you received the bids?

A. Yes. It does not matter. If they wanted 15 points they could have it on this.

Q. Have you given all the bids on that contract?

MR. SEVERANCE: You have given two only?

THE WITNESS: I gave three, I think, except the Carnegie. I did not give the price on that.

MR. SEVERANCE: I suggest you read this quotation under date of December 4th.

THE WITNESS: (Reading) "The chemical specifications given are satisfactory, except that on the first item it would be necessary for you to change sulphur and phosphorus to not over .04, instead of .03. If you can modify lengths to 10′, we could ship in two to three weeks, and based on furnishing smooth forged only, quote, for prompt acceptance, price of 1.56 cents per pound net, F. O. B. cars regular railroad freight station, Brooklyn, N. Y., subject to any advance or decline in carload freight rate.

"If you are unable to modify lengths to 10′, we could ship 12′ lengths in about four to five weeks, and quote, for prompt acceptance, price of 2.31¢ per lb. net, F. O. B. cars regular railroad freight station, Brooklyn, N. Y., subject to any advance or decline in carload freight rate."

By MR. DICKINSON:

Q. Did you make those modifications?

A. I did.

Q. That bid there was not on the specifications as you made them?

MR. SEVERANCE: It speaks for itself.

MR. DICKINSON: It calls for a change?

MR. SEVERANCE: He has read it, just now.

By MR. DICKINSON:

Q. To whom did you give that contract?

A. Carnegie.

Q. Are there any other contracts among those papers there that you had?

A. Yes, sir; I have some more.

Q. Take up the next one.

Are those the ones you handed me?

A. Yes.

Q. The same ones you handed me?

A. This morning, yes; I have one here that I sent out on the 27th of March.

Q. What year? Can you not get along a little faster? I do not want unduly to hurry you.

A. March 27; that was for 12,000 pounds, four-inch round, .18 to .25 carbon, manganese .40 to .60, any phosphorus and sulphur, eight to ten-foot lengths. I was quoted a price from the Carbon Steel Company on April 1st of 2½ cents a pound Pittsburgh.

MR. SEVERANCE: F. o. b. their works?

THE WITNESS: Yes, Pittsburgh, and I had a price from the Cambria Steel Company of 1.34 cents base per pound, half extras, half per cent. discount, f. o. b. Brooklyn.

The Carnegie Steel Company quoted on the 28th of March. Here is what I asked from the Carnegie Steel Company, and I have this on a regular form that I sent out. Carnegie quoted on 12,000 pounds, four-inch round open hearth steel about .18 to .25 carbon, low in phosphorus and sulphur, high in manganese; nothing special in manganese so that the steel would cost any more than regular machinery steel, but we would like to have it a little higher than regularly furnished.

Q. That was your request?

A. That was my request.

Q. On this 12,000-pound order of March 28, 1912?

A. Yes. Then I asked them to state their analysis that they were quoting on, and the Carnegie Steel says:

"We could ship from rolling at Pittsburgh in about four to five weeks, and based on furnishing open hearth steel .18 to .25 carbon, sulphur and phosphorus not over .05, manganese .60 to .80 in lengths five feet or over, quote for prompt acceptance price of 1.435 cents per pound net f. o. b. cars regular railroad freight station, Brooklyn, N. Y.; carload freight allowed, subject to any advance or decline in freight rate."

Q. Now, all this was for thirty days delivery, was it not?

A. One of those bids.

Q. Thirty days after receiving what?

MR. SEVERANCE: Carnegie's was four to five weeks.

By Mr. Dickinson:

Q. (Continuing) The bid from the Cambria was for the shipment to be about thirty days after receipt of order, was it not?

A. Yes, I think it was.

Mr. Severance: Let him look at it.

Mr. Dickinson: Very well; let him look at it.

The Witness: Yes.

Mr. Dickinson: What was the other one?

The Witness: The other one, four to five weeks; Carnegie.

Mr. Severance: It averaged about thirty days, then, 28 to 35?

The Witness: It does not say at all.

By Mr. Dickinson:

Q. Are all the bids on the 27th of March contract?

A. That is all I have; there may have been more; I did not look to see.

Q. There is one bid there of 2½ cents.

A. That was the Carbon Steel Company.

Q. That was a competitive price, such a price as would be made by anyone expecting to get a contract?

A. It is pretty hard to tell what another man means.

Q. Wasn't it a ridiculously low price?

A. He may have been quoting a different way; he may have figured on forging this; probably he was.

Q. He probably was?

A. He does not say so, but very likely he was.

Q. So he may have been figuring on something different from this?

A. He may have.

Q. And you do not know how that may be?

A. No.

Q. What other transactions have you there among those papers?

A. Here is one here sent out on the 8th of March, 1912.

Q. What was that for?

A. 2,500, iron or low carbon steel bars, weight of them, 250 to 254 pounds each, 6-inch round bars. Then there was

also on that inquiry 1,500, iron or low carbon steel bars, 5-inch round, weight 130 pounds, excess allowance, 3 pounds, and 500, iron or low carbon steel bars, 4-inch round; weight, 75 pounds; excess allowance, 3 pounds.

Q. Is that all?

A. That is all on that inquiry.

Q. You say "iron or low carbon." What do you mean by "low carbon"?

A. Low carbon steel.

Q. I know, but what would be the standard for calling it low?

A. .15 to .25, or .08 to .12, if they wanted it. .08 to .25, anything they wanted.

Q. You say ".08 to .25." That would be 8 what? What does the 8 mean? It means something.

A. Well, it is eight-hundredths of one per cent.—.08.

Q. Eight to 25 hundredths of one per cent.?

A. Yes.

Q. Was that the standard in price or not, or was that unusual?

A. That is standard.

Q. Standard?

A. Yes, perfectly.

Q. What do you mean by "standard" now? I want to be sure that we understand it the same way.

A. There is nothing special about it.

Q. And the ordinary bars quoted in the market; do they run that low in carbon?

A. Yes.

Q. They do?

A. Yes.

Q. What is the use of specifying it at all as low carbon?

A. I did not care if they sent iron; iron or steel—anything; and low carbon—I did not want high carbon, because it would be hard to machine it.

Q. Who were the bidders on that, and what were the dates of the bids?

A. The Crucible Steel Company bid on the 19th of March.

MR. SEVERANCE: Do you want him to give the price?

MR. DICKINSON: I don't care.

MR. SEVERANCE: He can very quickly; it is right there in front of him.

MR. DICKINSON: Well, let him give it.

A. 1.37 flat per pound f. o. b. Pittsburgh, 16 cents carload freight, would make the price 1.53 Brooklyn, net cash thirty days.

Q. What was the other bid?

A. One from Jones & Laughlin.

Q. What was theirs?

A. They bid, they quote a price of 1.10 cents per pound base, regular half extras, for size and for cutting, using the same extras as for hot sawing as per our list.

By MR. SEVERANCE:

Q. Have you figured out what that amounts to, adding those extras?

A. It comes to 1.48½ cents Brooklyn on the first item, six inch; 1.56 cents on the second, and 1.635 on the third.

Q. Were there three items in there?

A. There were three, six inch, five inch and four inch.

By MR. DICKINSON:

Q. Who else bid?

A. The Pennsylvania Steel Company.

Q. Give that date?

A. On March 14th; they bid on the six inch 2.45 cents per pound; on the five inch 2.50 per pound; on the four inch 2.50 per pound. He failed to mention on here whether that was a price delivered in Brooklyn or price at the mill.

Q. So you do not know which?

A. He failed to mention.

Q. Is that all the bids on that?

A. No, sir.

Q. Well, give the other one.

A. I have one from the Carbon Steel Company. They bid on the six inch 2½ cents; on the five inch 3 cents; on the

four inch 4 cents, forged only. There is nothing about delivery on that.

Q. What other bids were there?

A. There was a bid from Carnegie. I had better read this off: "We could ship from rolling at Pittsburg, in about four to five weeks, or sooner, and based on furnishing in weights given, quote, for prompt acceptance as follows f. o. b. cars regular railroad freight station, Brooklyn, N. Y., subject to any advance or decline in carload freight rate, terms net cash within thirty days, or discount of ½ of one per cent. within ten days, both from date of invoice: six inch rounds, 1.735 cents per pound net; five inch rounds, 1.66 cents per pound net; four inch rounds, 1.585 cents per pound net. We understand the weight per bar given for the last two items allows you sufficient metal to cut out two shelves; and if you could increase the weight of these items so as to enable you to get three shelves from one bar the price of the five inch would be 1.56 and on the four inch 1.485 cents per pound net."

MR. SEVERANCE: Does it say here where the delivery is, or have you already given that?

THE WITNESS: Brooklyn.

By MR. DICKINSON:

Q. Were there any other bids on that?

A. That is all, sir.

Q. Are there any other contracts there among those papers that you have shown me? Wait a minute—to whom did you award this contract?

A. I do not remember. It was not Carnegie.

Q. Is that all?

A. That is about all there is; yes, sir.

Q. I do not want about all. I want to know if that is all among the papers that you gave me. Is that all?

A. Here is one of March 29th.

Q. You understand what my question is? What do you understand it to be? My question is, I have been calling for the contracts embraced among the papers which you have produced and handed to me before adjournment.

A. Yes.

Q. I want to know if you have covered all those purchases.

A. No, I think there is one more.

Q. Then give us that, will you? Was that among the papers you handed me?

A. Yes, sir.

Q. All right, let us have that. What is the date of your solicitation?

A. March 27th.

Q. What year?

A. 1912.

Q. What does it call for? How many pounds, and what?

A. It calls for 50 tons of 6 7/16, and 25 tons of 6 13/16.

Q. Of what material?

A. Of steel of the following analysis: Carbon, .28 to .38; aiming about .30 to .35; manganese, .40 to .70; phosphorus and sulphur, .04, and under the allowable variation of not more than 1/32 inch under size or 1/16 inch over size, the price of both rolled and forged bars.

Q. There were 75 tons in that order?

A. Seventy-five tons.

Q. Who bid on that?

A. Alan Wood Iron & Steel Company sent their bid in on the 29th of March, and quoted $1.75 a hundred, steel billets, in accordance with specifications, $1.75 a hundred pounds, freight allowed to Brooklyn. "We are prepared to make prompt shipment of the above material," net cash thirty days.

Q. Now, go on; the next bidder?

A. Carnegie Steel Company.

Q. What date?

A. The 28th of March. "If smooth forged rounds, 12 feet long, are desired, we could ship in about six weeks, or if 10-foot lengths would answer, could forward from Pittsburgh in about two to three weeks. We are unable to advise just how close to dimensions desired we could forge these rounds, as necessarily one end of the bar would be forged at a radically different heat than the other. We would, however, caution our mill people to furnish as close to size as practicable,

all variations to be over rather than under. Based on furnishing as smooth forged bars, we quote for prompt acceptance as follows: F. O. B. cars regular railroad freight station Brooklyn, N. Y., subject to any advance or decline in carload freight rate: in 12-foot lengths, 2.31 cents per pound net; in 10-foot lengths, 2.06 cents per pound net. We could also supply regular rolled bars and ship from Pittsburgh in about four to five weeks. Referring to the variation in rolling noted, would say that it would be necessary for us to have a variation of .[illegible]" over; nothing under. While most of the bars would be rolled closer than this, it would be necessary for us to have the privilege of shipping all material that does not exceed this variation. On rolled bars in lengths five feet or over, we quote for prompt acceptance as follows: F. O. B. cars regular railroad freight station Brooklyn, N. Y., subject to any advance or decline in carload freight rate, 6 7/16 inches, 1.86 cents per pound net; 6 13/16 inches, 1.985 cents per pound net."

MR. SEVERANCE: Go on and give the next.

THE WITNESS: The Camden Forge Company quoted two cents flat on hammered bars.

MR. SEVERANCE: Where was that? Delivered?

THE WITNESS: Delivered.

MR. SEVERANCE: Delivered at Brooklyn?

THE WITNESS: Yes.

The Carbon Company quoted 2½ cents Pittsburgh, provided the lengths desired are not over ten feet. The Heppenstall Forge & Knife Company, 50 tons, 6 7/16 round at 1.75 cents per pound, hammered; and on the 6 13/16 round 1.75 cents per pound hammered.

MR. SEVERANCE: That is, delivered at Brooklyn?

THE WITNESS: That is all delivered at Brooklyn.

By MR. DICKINSON:

Q. Is that all the bids on that?

A. No, sir. Jones & Laughlin bid on it.

Q. Can you not give the date of it, and how much it is?

A. They bid on April 2nd steel of the following analysis: 1.15 cents per pound base, usual extras f. o. b. Pittsburgh,

delivery of hot rolled material; make delivery within one week after receipt of order; and also quoted on forging it at 2.75 cents per pound net f. o. b. cars Pittsburgh.

Q. Is that another one you have there?

A. Yes. The Bethlehem Steel Company.

Q. Give the date of it.

A. They quoted on March 29th, and they quoted 2⅝ cents per pound f. o. b. South Bethlehem, freight allowed to Brooklyn.

The Tioga Steel & Iron Company quoted on the 29th of March, and they quoted 1.55 cents per pound f. o. b. Philadelphia, freight allowed to Brooklyn.

Q. Is that all?

A. That is all.

Q. To whom did you award that?

A. I think that went to Tioga, if that was the lowest, and I believe it was.

Q. Do you know?

A. I just gave you the figures. I do not know without looking them over and figuring them out.

Q. That is all, then, embraced in these papers you submitted to me?

A. That is all, sir.

Q. This contract of October, on which Carnegie bid in the letter of October 9th: Did not Carnegie change the terms of the proposition that was made by you?

A. Do you want me to read it?

Q. No; first answer the question. I do not want to take up any more time than I can help.

MR. SEVERANCE: What did you want, Judge?

MR. DICKINSON: I want him to hear the question, and then he will know what I want.

(By request the stenographer repeated the pending question as follows:)

"Q. This contract of October, on which Carnegie bid in the letter of October 9th; did not Carnegie change the terms of the proposition that was made by you?"

THE WITNESS: No. I cannot see that they changed the terms any.

MR. COLTON: Let him read the letter.

MR. SEVERANCE: If you want him to. It made an alternative bid there. Let him read the whole letter. It will be quicker.

MR. DICKINSON: I do not want to fill up the record unless it is important.

MR. COLTON: I think the letter should go in.

THE WITNESS: The letter is as follows:

"CARNEGIE STEEL COMPANY.

New York, Oct. 9th, 1911.

E. W. Bliss Co.,
Adams St.,
Brooklyn, N. Y.

Dear Sirs:—

Replying to your 'phone inquiry of the 6th inst., for about 50 tons of 5 7/16" to 7⅛" rounds, O. H. steel, .15 to .25 carbon, aiming at .18, .40 to .70 manganese, phosphorus and sulphur .04 or under, and confirming conversation to-day, beg to advise that we would be unable to furnish the 6 7/16", 6 13/16" and 7⅛" as rolled bars, but could roll the 5 7/16", 5 13/16", and 6⅛". For the 6 7/16" we offer 6⅜" or 6½"; for the 6 13/16"—6¾" or 6⅞"; for the 7⅛"—7".

Based on furnishing in lengths 5' or over, we quote, for prompt acceptance, as follows, F. O. B. cars regular railroad freight station, Brooklyn, N. Y., subject to any advance or decline in carload freight rates:

5 7/16"	1.56¢	per lb. net
5 13/16"	1.685¢	"
6⅛"	1.81¢	"
6⅜ or 6½"	1.81¢	"
6¾ or 6⅞"	1.81¢	"
7"	1.935¢	"

We could also furnish all of the items as originally given by you as forgings, and based on supplying smooth forged

only, lathe cut to lengths 5' or over, quote price of 2.41¢ per lb. net, F. O. B. cars regular railroad freight station, Brooklyn, N. Y., subject to any advance or decline in freight rate. We could ship in about two months.

Thanking you for the inquiry, and trusting to have the pleasure of entering your order, we remain,

Yours very truly,

CARNEGIE STEEL COMPANY

CHARLES C. CLUFF
Manager of Sales.

LW-M. L. W."

MR. DICKINSON: That is all.

By MR. SEVERANCE:

Q. Mr. Marshall, were these examples that you have produced here of competitive bidding selected particularly by you, or how did you happen to have these particular ones with you?

A. I went to the file, and I just opened it and took out all the bids under the C's—I did not take them all out, but I took out a number of bids from the Crucible Steel Company and the Carnegie Steel Company. Then I looked through at different other people that I thought would be likely to bid on those same bars, until I got several bids on each inquiry.

Q. Do you pretend to say, then, that these are all the bids you received in any of these cases?

A. Oh, no; I would not say that; I may have had more bids.

Q. And this is only a very small fraction of the number of lots that you requested bids on, is it not?

A. Yes.

Q. You had bids on a great number of different lots during these five years?

A. Yes.

Q. You selected them in that way, and they were not selected with the idea of showing wider discrepancies than ordinarily, were they?

A. No.

Q. By discrepancies, I mean differences between the bids of the bidders. You understood my question in that way, did you not?

A. Yes.

Q. You would not undertake to say, would you, that Carnegie has never bid on .03 phosphorus, but merely that in this particular case you had here they said they could not bid on less than .04?

A. They never made any bid to me on .03.

Q. How about the steel that you received from them. Did you not get steel from them running as low as .03 at times?

A. It very seldom runs over .03.

Q. Although they do not bid on that basis they actually deliver it ordinarily?

A. Yes, sir. I have about ten per cent. of all the bars that come into our shop analyzed, and I do not ever remember receiving any bar that ran over .03 in phosphorus.

Q. From the Carnegie Steel Company?

A. From the Carnegie Steel Company.

Q. It has been your practice to analyze bars in that way ever since you have been the purchasing agent?

A. Unless I requested it. In one or two instances I have requested them to select particularly high sulphur stock. It makes good threading steel.

Q. This memorandum I started to question you from was merely a memorandum made up from these original quotations that you have introduced, was it not?

A. That is all.

Q. Then I do not care to go into the memorandum, Judge Dickinson having produced the originals. That is all.

By Mr. Dickinson:

Q. Your testimony, then, as to prices, was just based on these particular transactions, was it?

Mr. Severance: He did not say that.

Mr. Dickinson: I am asking him that. I am not saying it. I can ask the witness whether he says a thing or not. He is not my witness. I can lead him if I want to, or try. That is perfectly legitimate.

(By request the stenographer repeated the pending question.)

THE WITNESS: No; I would not say that, no.

By MR. DICKINSON:

Q. Your memorandum that you undertook to refresh your memory with was based upon these papers you have produced, was it?

A. Yes, but not altogether.

Q. That is all that you have introduced here to sustain it, is it not?

A. Yes.

MR. DICKINSON: Then we object to any testimony based upon anything else in the memorandum as being secondary.

By MR. SEVERANCE:

Q. I will ask you this question: When you testified this morning that you were buying from time to time, and had been for the last five years, that you had secured competitive bids and prices when you made your purchases, and that those prices were not uniform among the bidders, you did not understand that you were confining your answer to these few transactions concerning which you were examined by Judge Dickinson?

A. No.

Q. Did that apply to all your purchases?

A. All our purchases were based on competitive prices.

Q. And the testimony as to bids varying in price applied to your business generally?

A. Yes.

By MR. DICKINSON:

Q. Can you give the details of the dates or prices on any of them except those that you produced these letters about?

A. I would not want to do it offhand, no.

Q. Haven't you said you could not do it, and can you do it?

A. No, I cannot.

OTTO J. BLOSS

was called as a witness on behalf of the defendants, and being first duly sworn, testified as follows:

DIRECT EXAMINATION

By Mr. Reed:

Q. Where do you live, Mr. Bloss?

A. Brooklyn, New York.

Q. How long have you lived there?

A. Thirty-three years.

Q. What is your business?

A. The iron business.

Q. What is the name of your firm?

A. The Reliance Architectural Iron Works.

Q. How long have you been with the Reliance Architectural Iron Works?

A. Twenty-three years next February.

Q. You went with them, then, in 1891?

A. Yes.

Q. What kind of steel materials, if any, does your company buy?

A. All kinds of material that are used in the fabricating of structural and ornamental iron work for buildings.

Q. Have you fabricating shops?

A. Yes.

Q. Do you buy structural shapes?

A. Yes.

Q. And plates?

A. Yes.

Q. And bars?

A. Yes.

Q. About what tonnage would your purchases average over the last six or eight years?

A. About 1,500 tons.

Q. A year?

A. Yes.

Q. From what companies have you been buying in recent years?

A. From any company—we have been buying from the Cambria, Jones & Laughlin, Eastern Steel and Phoenix Iron Works.

Q. Do you buy any from the Carnegie?

A. A little bit, yes.

Q. About what percentage of your purchases have been from Carnegie?

A. About five per cent.

Q. Do you buy on annual contracts, or do you buy in lots as you need the material?

A. We buy in lots as we need for contracts. That is to say, if we get a contract to-day for a building, and we require a certain amount of material, why we go out in the market and get a price on it.

Q. Do you get quotations from these different manufacturers that you have named?

A. Yes.

Q. How do you get quotations from them?

A. By going around and soliciting quotations from them personally.

Q. And do those companies quote you on what you need?

A. They do.

Q. How do those quotations that you receive range in price? Do they vary, or are they uniform, in response to particular inquiries?

A. Well, one time one man will sell at a lesser price, and at another time another man will——

Q. Take the quotations you receive on a particular lot that you need; will the quotations from those different companies be uniform or will they be variant?

A. There may be some two or three of them that will be alike, and some one or two of them will be different.

Q. How long has that been so?

A. Why, since I have been in business, with the exception of a period something like 27 or 28 years ago.

Q. That was about 1886?

A. Something like that.

Q. What happened then?

A. There was a time there that we could not buy struc-

tural material for less than—I will not say whether it was 3.1 or 3.3 cents; it was either one of them.

Q. You could not buy it from anybody for less than that?

A. Absolutely not.

Q. Has that condition obtained at any time within your recollection since 1886?

A. Well, I will not say; it may have lasted one or two years longer than that time, but not since that time.

Q. Not since 1890?

A. No, not since that time, not since I have been in business with the Reliance Architectural Iron Works; not at any time.

Q. Will you state whether or not since 1891, when you started with the Reliance Architectural Iron Works, there has been genuine competition for your business among the manufacturers of structural material, so far as you have been able to observe?

MR. DICKINSON: I object to that as calling for a conclusion of the witness as to "genuine," without any definition of the term, or any definition of what the witness understands by it, or any disclosure of the facts upon which the witness might base his opinion.

THE WITNESS: There has.

Q. Mr. Bloss, do you ever read the Iron Age?

A. Once in a great while.

Q. Do you ever read quotations on structural material that appear in the Iron Age?

A. Not any more than I might in reading an evening paper, read an advertisement, just because I had the time.

Q. Do you base your business on the quotations that you read in the Iron Age?

A. No, sir.

Q. Why not?

A. Why, I do not think, from what quotations I have read in the Iron Age, maybe once in a year or maybe once in two years—I can go out and beat the prices in the market.

Q. So far as you have followed their quotations, then, they have been higher than the quotations that you yourself could go out and get in the market?

A. They have.

Q. I want to ask you about the period around, say, between 1897 and 1904. Did you know that there were pools about that time in structural material and in plates?

A. I did not know it, but I heard it.

Q. Did you ever see it mentioned in the papers?

A. Yes, sir.

Q. Did you know, from reading the papers or otherwise, what the pool price was in those days?

A. Yes, I think I can recollect that there were certain prices which they claimed were the pool prices.

Q. How did that pool price compare with the prices that you were able to get quoted to you by going around among the different manufacturers?

A. I can not recollect just what percentage of difference there was between the prices I could buy the material at and what the pool price was; I can not recollect that.

Q. Can you recollect whether there was any difference?

A. Oh, yes.

Q. Were you able to beat the pool price?

A. Always.

MR. REED: Cross examine.

CROSS EXAMINATION

By MR. DICKINSON:

Q. Do you know who was in that pool?

A. No, sir. I did not know there was a pool. I only read in the paper that there was a pool.

Q. You do not know whether you purchased from anybody that was in that pool at less than the pool prices?

A. No, sir; I can not swear to that.

Q. You say you only read the Iron Age once a year?

A. Sometimes I might read it, at times—I might read it two or three times a year, at times.

Q. I understood you to say you read it once a year.

A. I might, I say, or I might read it once in three years, or I might read it three times in one year.

Q. Then you practically did not read it at all?

A. I am not interested in the Iron Age.

Q. Are you interested in any other trade paper that quotes prices?

A. No, sir.

Q. You do not keep up with the literature on that subject?

A. No, sir.

Q. You speak of genuine competition?

A. Yes, sir.

Q. You always got a price that was—did you say under the market price, or what did you say?

A. Under what was known as the market price.

Q. Then there was a price known as the market price?

A. Yes, sir.

Q. And from somebody you could get under that?

A. Yes.

Q. Not always from the same one?

A. No.

Q. From various ones?

A. Yes.

Q. At various times and under various conditions?

A. Yes.

Q. That was done by special trading, was it, and bargaining?

A. No, I never did any bargaining; I went around and got prices, and some of the prices were lower than what was known as trade prices.

Q. You could find some one who would sell you lower than that?

A. Yes, sir.

Q. Your tonnage this year is how much, in steel? How much do you consume in steel?

A. It is pretty low this year. I guess this year I would be down—I do not think it would go over 1,000 tons this year.

Q. Have you any contracts running over a period of time?

A. With mills?

Q. Yes.

A. Never had any.

Q. Never had any contracts?

A. No, sir.

Q. You purchase just occasionally, as your needs require?

A. Just as we have the demand.

Q. Take last year: How many tons did you use; 1912?

A. I should say an average of about 1,500 tons.

Q. Last year?

A. Yes.

Q. Take two years ago, 1911: What did you use?

A. I would say about the same.

Q. And that would run on back how far?

A. I guess back to a time about three years after we started in business.

Q. After who started in business?

A. After I started in business.

Q. And that was about 1891?

A. Yes.

Q. So far as the consumption of steel is concerned, it has been just about the same all that time?

A. Yes, sir.

Q. What kind of steel do you buy?

A. What kind of steel do we buy?

Q. What form; how is it known, by what name?

A. We buy beams, we buy channels, we buy Z-bars, tees, angles; we buy flat steel bars, we buy round steel bars, we buy square steel bars.

Q. So in this 1,500 tons there is a great variety?

A. Yes, sir.

Q. Some of the varieties, then, of particular kinds must be very small?

A. Yes, sir.

Q. Do you buy any structural shapes?

A. Yes, sir.

Q. Are they fabricated or unfabricated?

A. Both.

Q. In tonnage, how much fabricated do you buy a year?

A. I should say about 500 tons.

Q. And of unfabricated, how much?

A. 1,000 tons.

Q. And that would make 1,500 tons of structural shapes that you buy, would it?

A. No, I mean all told.

Q. All told? What do you mean?

A. I stated—at least I meant to have stated that we buy about 500 tons of fabricated material and about 1,000 tons of plain material.

Q. And what does that plain material embrace, what different kinds of things?

A. Structural shapes, flat bars, round bars and square bars, sheets, plates.

Q. Do you use any iron?

A. Very little.

Q. Well, about how much, in tons?

A. I do not believe more than ten per cent. is iron.

MR. DICKINSON: That is all.

WILLIAM W. LUKENS

was called as a witness on behalf of the defendants, and being first duly sworn, testified as follows:

DIRECT EXAMINATION

By MR. SEVERANCE:

Q. Where do you live, Mr. Lukens?

A. I live in Ardmore, Pennsylvania, which is a suburb of Philadelphia.

Q. What is your business?

A. I am with the Alan Wood Iron & Steel Company, of Philadelphia, my particular title being secretary and assistant treasurer.

Q. That being your title, what may be your duties?

A. I am afraid they are a little general to describe in detail. I have the ordinary duties of a secretary of a corporation, perhaps less than the normal duties of a treasurer; and a great deal of my time is spent in work on sales; in the sales department.

Q. How old an institution is the Alan Wood Company?

A. The Alan Wood Company itself began as a partnership in 1857. One of the founders of the company was in the

iron and steel business many years prior to that, his connection with it dating back to 1826; but in 1857 he formed a partnership with my grandfather, it so happens, and that partnership was known as Alan Wood & Company.

Q. Up to what time did that partnership continue?

A. 1886.

Q. Then it became a corporation?

A. It was incorporated, under the title of The Alan Wood Company.

Q. What is the present corporate name?

A. The Alan Wood Iron & Steel Company.

Q. How long have you been in the business, Mr. Lukens?

A. I have been with the company since August 1, 1892. That is one of the important historical dates I shall never forget.

Q. Mr. Lukens, what classes of products does the Alan Wood Iron & Steel Company make?

A. Pig iron, billets, blooms and slabs of steel, and light plates, and light sheets of both iron and steel.

Q. At what time did the Alan Wood Company commence making steel products?

A. About 1901; I should not like to state precisely.

Q. About 1901?

A. 1901 is approximately accurate.

Q. They commenced making billets at that time?

A. Yes.

Q. And previous to that time had they purchased billets in the market?

A. Yes.

Q. And before that, I suppose, they had puddling furnaces, did they not?

A. Yes; and they have still.

Q. Have you, at the present time, any blast furnaces?

A. Two.

Q. When were those built?

A. The last one of them built was erected between 1910 and 1912; I cannot give you the date of erection of the other, because it antedates our ownership.

Q. How did you acquire the other one?

A. By merger with another company.

Q. With an iron company?

A. Yes.

Q. How many years ago did you secure this iron company?

A. We took over the capital stock of that company in 1909, I think, and practically controlled it from that time. I beg your pardon. I am not perfectly positive as to the date. I suppose it is not material.

Q. It is about that time?

A. Yes.

Q. That is quite sufficient.

Previous to that time where had you secured your supply of pig iron?

A. We had bought it from the merchant furnaces largely in the eastern district of Pennsylvania.

Q. How many steel making furnaces have you?

A. Nine open-hearth furnaces.

Q. When were those built?

A. Between 1899 and 1901; they were a year, a year and a half or two years in building; I have forgotten exactly.

Q. And they were all built during that period, were they?

A. No. Five were built first and four added later.

Q. When were the other four added?

A. I do not exactly——

Q. As nearly as you can recall. It is not essential that you be absolutely accurate.

A. From four to five years later, perhaps.

Q. They were all built at one time—the other four?

A. Yes; we built four at once, as an addition.

Q. Where have you secured your ore for your blast furnaces?

A. From the Lakes; that is, from the Lake ore district; from Newfoundland; Spain; Cuba; a little from the North Coast of Africa, recently; from South America; a little, recently, from Texas.

Q. Have you bought some at times from the Adirondack region, or have you not?

A. We buy ore from Witherbee, Sherman & Company, in the Port Henry district. I thought you were referring, rather, to the ores we used in our blast furnaces. We use the Port Henry ore in our open hearth furnaces.

Q. I see. The Lake ore you bought has been purchased from whom?

A. From the large factors in the Middle West: Corrigan, McKinney & Company, Pickands, Mather & Company, and I think there is one called the Cleveland-Cliffs Iron Company. We may have bought from others.

Q. Did you ever buy any from Oglebay, Norton & Company?

A. Yes.

Q. In what localities do you market your finished products?

A. Of course wherever we can to advantage. But, as a matter of fact, due to the operation of unfavorable freight rates, we are confined largely to the Atlantic coast and the Pacific coast.

Q. How do you ship to the Pacific coast?

A. Either all rail or by rail and water.

Q. When you ship by rail and water, by what route do you ship?

A. We have sent enormous quantities around the Horn, both by sail and by steam, and we have sent large quantities that were trans-shipped at the Isthmus.

Q. That is the Isthmus of Panama?

A. Yes.

Q. Have you shipped any by the Tehuantepec route?

A. I think we have in the past, but I do not recall any such shipments recently.

Q. Are these rates by water to California points lower or higher than the all-rail rates?

A. They are lower.

Q. They are substantially lower, are they not?

A. Yes.

Q. What is the rate on finished products from your mill to tidewater?

A. You mean our lowest rate?

Q. The rate that you pay on the stuff you send to California; or is that absorbed by the water line?

A. Not always. Of course we can ship either via New York or via Philadelphia. The rate to New York from our mill is nine cents a hundred pounds and the rate to Philadelphia is three and a half cents a hundred pounds. Naturally, a good deal of this trans-continental traffic that goes by rail and water goes by way of Philadelphia for that reason.

Q. How does that rate by rail and water to California compare with the all-rail rate from Pittsburgh to California points?

A. Without going into detail, which I would not trust myself to do, it averages about 30 cents a hundred pounds lower by rail and water than by all-rail. When I say without going into detail, I mean that the railroad tariffs provide different rates for different thicknesses of sheets. I would not like to be positive as to just those differences, but the average rate I know by rail is about 85 cents.

MR. DICKINSON: I want to understand from what points he means.

MR. SEVERANCE: I was just going to ask about that.

By MR. SEVERANCE:

Q. My question was as to the rate from Pittsburgh to the coast.

A. Then I am quite astray; I beg your pardon. The difference, if Pittsburgh ships all rail and we ship the cheapest way we can?

Q. Yes; that is right.

A. It would average 30 cents a hundred.

MR. DICKINSON: That is what you said before, is it not?

THE WITNESS: I am not sure whether I had properly answered that question or not.

MR. SEVERANCE: You know there is a large part of the country blanketed on California points by rail.

THE WITNESS: If you do not mind?

MR. SEVERANCE: Yes.

THE WITNESS: If we ship all rail, the rate is the same from Pittsburgh.

MR. SEVERANCE: That is what I thought; it is blanketed.

THE WITNESS: I was comparing the all-rail rate from Pittsburgh with our rail and water rate.

By MR. SEVERANCE:

Q. Is it not a fact, or do you not know that the fact is—I will ask you whether it is not a fact that the all-rail rate to California points, even from the Chicago district, is as high as from the Philadelphia and Pittsburgh districts?

A. I should know that, but I do not.

Q. Where is your market along the Atlantic Coast? Is it pretty well scattered along this coast? You spoke of its being along the Atlantic Coast and the Pacific Coast.

A. Yes, widely scattered, from New England to the Far South.

Q. How do you bring your traffic to New England points? All-rail or water and rail?

A. To-day it is all-rail movement.

Q. How do you move your traffic into the South, all-rail or water and rail?

A. By both methods.

Q. Which is the cheaper, for the broken line, or all-rail line?

A. That depends upon the destination. For the more distant points, such as Texas, the rail and water movement is cheaper.

Q. How is it to points like Savannah and Charleston?

A. We ship so little there that I am not familiar with the rates, but I am quite certain it is cheaper to go by water.

Q. Do you recall now what the difference is in the rate by rail and water to Texas terminals, and the all-rail rate to Texas terminals?

A. From our own works?

Q. Yes.

A. No, sir; I do not, because all of our business to Texas moves by rail and water, and I have not had occasion to familiarize myself with the all-rail rate.

Q. Well, you know it is cheaper?

A. Oh, undoubtedly.

Q. What classes of sheets do you make chiefly? You stated you made light sheets. What does that mean?

A. Well, it actually means anything from 3/16 of an inch up to No. 28 gauge.

Q. Do you make what are known as blue annealed sheets?

A. Yes; they are the larger part of the output of our rolling mill.

Q. What competitors have you in the markets that you serve in blue annealed sheets?

A. We have the La Belle Iron Works, the American Sheet & Tin Plate Company, the Portsmouth Steel Company, and our neighbors, J. Wood & Brothers Company.

Q. They are in your town, are they not?

A. Yes; and the Youngstown Iron & Steel Company, I think it is called.

Q. The Youngstown Iron & Steel Company; that is a different concern from the Youngstown Sheet & Tube?

A. Yes.

Q. Do you meet any competition from the Youngstown Sheet & Tube Company on blue annealed sheets?

A. I think they do not make them. If they do, it is a recent extension of their operations.

Q. How long have you been making these blue annealed sheets?

A. Well, approximately since 1857. I cannot tell you when they put up the first mill which made what is known as blue annealed sheet. It was originally iron, but now it has drifted down extensively to steel.

Q. How long have you been making those in the last twelve years in steel—since 1901?

A. For many years before that.

Q. During that period from 1901 to the present time what has been the situation as between yourselves and your neighbors, as to whether in those sheets there has been open competition, or has it been one where the prices have been fixed by agreement with your competitors?

A. It has been a very highly competitive market.

Q. All the time?

A. Oh, yes; we cannot make agreements, I believe.

Q. What has been the fact as to whether the competitors and yourselves have quoted uniform prices, or have you quoted varied prices on specifications submitted to you when you have asked for bids?

A. Varied prices.

Mr. Dickinson: You say "when you have asked for bids." Read that question. Does that call for bids made by him?

(The question was repeated by the stenographer.)

Mr. Severance: When you have been asked to make bids. Do you understand my question?

The Witness: I understood you wanted to know whether, when we were asked to bid, we bid always the same price to everyone, or whether we bid different prices, or whether we bid different prices from our competitors.

By Mr. Severance:

Q. That is what I want to know, that latter.

A. Different prices; I do not know that they were always different, because I do not know what our competitors asked, in most cases; occasionally, I hear, but usually I do not.

Q. Is it a fact that when you are asked to make bids you sometimes secure the contract and sometimes you do not?

A. Oh, yes, that is eminently true.

Q. And has always been so, hasn't it?

A. Yes, sir.

Q. In making these bids upon tonnages, have you made your prices independently of whatever might be quoted by others?

A. We must have done that, because we never know what other people are quoting.

Q. You make your own prices?

A. We make our own prices and try to get as much as we can, always.

Q. I have been interrogating you with reference to blue annealed sheets particularly, but I will ask you generally now as to whether the testimony you have given as to quot-

ing your own prices, irrespective of what your competitors quoted, would apply to your other products as well as blue annealed sheets?

A. Yes, sir; it does.

Q. You stated among other things that you made billets. Do you sell billets in the market, or do you consume your own billets?

A. We do both; that is, we do not consume them all, and so we have some to sell.

Q. And in the matter of billets what steel makers are in competition with you, if any?

A. It is rather a long list; almost every billet maker in the United States.

Q. Will you name them?

A. I do not know that I can name them all. I can give you a good many of them. Pennsylvania Steel Company, Cambria Steel Company, Carnegie Steel Company, Lackawanna Steel Company, Pittsburgh Steel Company, Wheeling Steel & Iron Company, La Belle Iron Works; United Steel Company of Canton, Ohio. There may be a few others. It is pretty hard to be sure.

Q. Do Jones & Laughlin sell billets in competition with you?

A. They sell small billets, but I think not as a rule billets of the size that we manufacture. I should not like to be too positive about that

Q. Do you make small billets, too?

A. We do not, no.

Q. You stated that you sold some billets and used some yourself?

A. Yes, sir.

Q. Does that excess over what you need to use vary with different conditions of the steel market?

A. Yes, it varies, because when we are unable to run our rolling mill full, theoretically we would have a larger excess for sale. As a matter of fact, those things go almost hand in hand. If business is bad in one department, it is likely to be bad in another. We always have some excess.

Q. Can you name the companies that you meet in com-

petition in the sale of plates; you stated you make light plates?

A. Those are the companies that I named when you asked about sheets. We refer to light plates simply to distinguish them from very light sheets. They are made on different kinds of mills. Perhaps the word "plates" should not come into the discussion at all in connection with our business, because what we produce is known to the trade as sheets.

Q. So the testimony you gave relative to blue annealed sheets, so far as the names of your competitors are concerned would apply to your light plates?

A. It covers the output of that department of the company.

Q. Do you make any blooms and slabs or only billets?

A. No; blooms and slabs.

Q. And where do you sell them; what part of the country?

A. As far west as Cleveland, some on the Pacific coast; the great bulk of them on the Atlantic seaboard.

Q. And would that testimony as to the point at which you market your blooms and slabs apply likewise to billets, or is that a different market?

A. Well, in my understanding of those terms it would apply to all three.

MR. DICKINSON: All three what?

THE WITNESS: Billets, blooms and slabs. Those terms are almost interchangeable.

By MR. SEVERANCE:

Q. Has the business of the Alan Wood Iron & Steel Company increased or decreased in amount during the last twelve years?

A. It has increased.

Q. Substantially?

A. Very largely.

Q. Has the competition that you have met with in the business increased or decreased during the same period?

A. It has increased.

MR. SEVERANCE: That is all.

CROSS EXAMINATION

By Mr. Dickinson:

Q. You mean that it has increased in a greater ratio in the last period?

A. I think it is more severe than it ever has been.

Q. Within what time do you refer to when you make that statement—now?

A. No, since 1900.

Q. Since 1900 it has become severer to you, has it, than it was before that?

A. Yes, sir.

Q. Well, how has this severity manifested itself?

A. The difficulty of getting business; of course not at all times. We have had periods since 1900 when business has been extremely good, and when any man with even an ordinary ability could have run any plant without difficulty. I mean taking the average of our operations since that time.

Q. In the year 1900 what was your output in billets?

A. I think we were not making them then.

Q. When did you begin making them?

A. We were then, as I recollect it—I hope you won't hold me to absolute accuracy of dates, but as I recollect it we were then building this plant where we make them.

Q. When was that?

A. That was during 1900, and we began to make them in 1901, I think.

Q. Let us take 1902, which would be certainly clearly after you got started.

A. Undoubtedly we were making them then.

Q. How many billets did you make then?

A. I do not know.

Q. Can you give any approximation of it?

A. No, I could not.

Q. What was your output then compared with the output of the United States Steel Corporation?

A. I have no idea at all; you have got into figures which I am not familiar with.

Q. Could you approximate them in size?

A. Could I?

Q. Yes.

A. I could not.

Q. Could you state about what proportion you made and the amount they made?

A. No, sir.

Q. Were you a strong concern as compared with them in the amount of billets you put out?

MR. SEVERANCE: I object to that as asking for a conclusion and not for a fact.

THE WITNESS: Shall I say what I think?

By MR. DICKINSON:

Q. Tell me the facts.

A. I should say that we were a small factor as regards the country as a whole, and a fairly active factor as regards the district in which we operate.

Q. How long did you continue to be a small factor as compared with the country as a whole?

A. We are still a small factor compared with the country as a whole.

Q. So that relative position has not been changed?

A. We have changed it somewhat by increasing our output; only to that extent.

Q. And they have increased theirs, too, haven't they?

MR. SEVERANCE: Who do you mean by "they"?

MR. DICKINSON: The United States Steel Corporation and its subsidiaries.

THE WITNESS: I think they have increased some, yes.

By MR. DICKINSON:

Q. You think they have increased some since 1900; is that your impression?

A. Well, I have not those figures of their tonnage in my head at all; I know they have increased somewhat.

Q. And whether it is materially or not, do you know?

A. I fancy it is.

Q. But you have no idea of what it is?

A. I have no idea of what their tonnage was in 1900 or 1901; I do not know what it is now.

Q. Well, now, you spoke of ores. Take the year 1912, how much ore did you get in Texas during that year?

A. We did not get any.

Q. Well, take the years previous to that, back to the year 1900, how much did you get from Texas?

A. None; it is a new operation.

Q. When did you begin?

A. This year.

Q. How many shipments have you had from there?

A. One cargo.

Q. When did you get that?

A. A month or six weeks ago.

Q. What did it amount to in tonnage?

A. Twenty-five hundred to three thousand tons, I think.

Q. That is all the ore you have ever gotten from Texas?

A. Yes, sir.

Q. Take South America; how much ore did you get from there in 1912?

A. I cannot tell you, sir.

Q. Can you say that you got any?

A. I do not know whether we got any in 1912. That also is a new operation. Whether any of it arrived in 1912, or whether it all has come in this year I cannot say.

Q. You got some this year, did you, from there?

A. Oh, yes; a considerable quantity.

Q. Let us see in what quantities, and where you got it from. Just tell us, please.

A. Well, you are getting me into the figures of our purchasing department, which I cannot give you with any accuracy. I should judge that we had had from eight to twelve cargoes of from 2,500 to 3,000 tons each this year.

Q. Are you sufficiently informed to state whether that is approximately correct or not? Do you know it to be?

A. I am giving it only as an approximation.

Q. You say you had how many cargoes?

A. I think from eight to twelve.

Q. You cannot say whether it was eight or twelve?

A. I cannot.

Q. Where did that ore come from?

A. That ore came from the banks of the Orinoco River.

Q. Are you getting ore constantly from there now, in regular shipments?

A. We have been since it started.

Q. When did it start?

A. I think about the 1st of the year; but I do not really recall just when. It is a department of the business in which I am not active.

Q. Take the year 1912: How much did you get from the coast of Africa in the year 1912?

A. I don't know.

Q. Can you state whether you got any prior to the year 1912 from the coast of Africa?

A. No, I cannot.

Q. Do you know that you have ever gotten any from the coast of Africa?

A. Oh, I know that we have had some, yes; and have said so.

Q. When?

A. I think it was this year.

Q. But you cannot say positively whether it was this year or not?

A. Yes; it was this year.

Q. What time?

A. I don't know.

Q. How many shipments?

A. I don't know.

Q. What was the total tonnage?

A. I don't know.

Q. Take Cuba: In the year 1912 how many tons of ore did you get from Cuba?

A. I don't know. You are asking me about things which, if I had known them, would require a feat of memory of which I am perfectly incapable; but, as a matter of fact, you are asking me questions about a phase of our business with which I am only broadly familiar.

Q. I am only asking you about what you have already testified, and that is that you got ore from these places.

A. Of that I am well aware; but I cannot say when and I cannot say how much.

Q. You cannot say whether you got any in 1912 from Cuba?

A. No, I cannot say definitely. I cannot answer a question like that with certainty.

Q. Take the years previous to that, back to 1900: Can you say you got any from Cuba?

A. We were not buyers of ore then.

MR. SEVERANCE: You say "back of 1900"?

MR. DICKINSON: Back to 1900.

MR. SEVERANCE: I misunderstood the question then.

THE WITNESS: We have been buyers of ore only since the latter part of 1911.

By MR. DICKINSON:

Q. I did not know that. You had not stated that, or I would not have asked you those questions.

What ore, then, did you get from Spain, if any, in 1911?

A. I cannot give you the tonnages or the years. I know that we have had a large movement of ore from Spain on a number of occasions since we became interested in this blast furnace which we now own, but again I cannot give you the details.

Q. You said "large". That is a relative term.

A. Yes; it is indefinite, I know.

Q. What do you mean when you say "large"? Give me some idea of what you mean by it. Take the year 1912: Can you approximate what you got from Spain in the year 1912?

A. No, sir; I cannot.

Q. In 1913?

A. No, sir; I cannot.

Q. How much ore did you use altogether in the year 1912?

A. I don't know.

Q. Where did you get the bulk of that ore; from what sources; I mean, from what region?

A. In 1911?

Q. Well, we will say in 1911.

A. Indeed I don't know.

Q. Did you not get the bulk of your ore, and have you not always gotten it, from the Lake Superior region?

A. Well, my guess would be no; but it would be a guess.

Q. I do not care for your guess.

You said that you sent enormous quantities of steel products around the Horn. We have been trying to get some definition heretofore of adjectives. Give me some idea of what you meant when you said "enormous" quantities. Also state in what years they were shipped?

A. I was speaking in a very general way when I said that. I mean that in all the years that I have been familiar with the business we have shipped largely to the Pacific coast. I do not know what percentage of our tonnage. It varies very much.

Q. I understood you to say that you shipped enormous quanties around the Horn, and large amounts by the Isthmus.

A. We certainly have, in all the years that we have been in business.

Q. Let us take the year 1912; what tonnage did you ship around the Horn?

A. I have not the faintest notion.

Q. Have you the faintest notion for any year from 1912 back to 1900?

A. No; I regret to say that I cannot carry those figures in my head. I doubt whether I have ever seen a statement as to just how much we have shipped to the Pacific coast.

Q. Take the year 1912: What was your steel product in tonnage?

A. My recollection is that it was about 240,000 tons. Again I want to have it understood that I am not definite on that point. I have no data with me, and make no effort, really, to remember figures of that kind. It is very difficult to answer such a question.

(Whereupon an adjournment was taken until to-morrow, Thursday, October 30, 1913, at 10:30 o'clock a. m.)

ONE HUNDRED AND SIXTH DAY.

EMPIRE BUILDING,
71 Broadway, New York City.

Thursday, October 30, 1913.

Before Special Examiner JOHN ARTHUR BROWN.

Present on behalf of the United States, MR. DICKINSON and MR. COLTON.

Present on behalf of the defendants, MR. LINDABURY, MR. SEVERANCE, MR. BOLLING and MR. REED.

WILLIAM W. LUKENS,

the witness under examination at the taking of the adjournment, resumed the stand.

CROSS EXAMINATION (Continued)

By MR. DICKINSON:

Q. Mr. Lukens, you had two blast furnaces?

A. Yes.

Q. What was the annual capacity of each of those?

A. The capacity of the two furnaces is 225,000 tons a year. I can figure out the separate capacity of each if you would like to have me do so, in a moment.

MR. SEVERANCE: That is, of the two plants?

THE WITNESS: Of the two blast furnaces.

By MR. DICKINSON:

Q. What does it cost per ton to transport your coke from place of shipment to your furnaces?

A. From the Connellsville region the rate is $2 and from the Mountain district, as it is called, $1.80.

Q. Where do you get most of it from?

A. Connellsville.

Q. Is your coke high or low, as compared with other manufacturers—say those at Pittsburgh.

A. Our coke costs us more, on account of the freight that we pay.

Q. What position did Mr. Howard Wood hold with your company?

A. He was president of the company.

Q. He is dead now?

A. Yes.

Q. When did he die?

A. In 1911.

Q. Was he president in 1908?

A. Yes, sir.

Q. Was he a member of the Billet and Sheet Bar Committee that had its meetings after the Gary dinners?

A. I think Mr. Wood was a member of that committee.

Q. You went abroad and got back when?

A. I went abroad in the early part of 1908, and came back the end of March or the beginning of April.

Q. Of 1908?

A. Yes.

Q. After you got back, did you attend any of these so-called Gary committees—I designate them in that way.

A. Yes.

Q. Which one did you attend?

A. The Sheet Committee.

Q. When did you begin attending it?

A. I think it was early in April, 1908.

Q. Who presided over that committee?

A. Mr. James A. Campbell.

Q. Of Youngstown?

A. President of the Youngstown Sheet & Tube Company.

Q. How many meetings did you attend, so far as you can recall, in the year 1908?

A. I suppose six or eight.

Q. Did you attend any in 1909?

A. I think there were some meetings in 1909, the early part of the year.

Q. Were you there as the representative of your company?

A. Oh, entirely; yes.

Q. What was the last meeting of that committee that you attended?

A. The date, you mean?

Q. Yes, about?

A. I don't remember.

Q. What year was it?

A. It was 1909, I think.

Q. You cannot give the date?

A. No, I could not give the date.

Q. Is it your recollection that you attended several meetings in 1909?

A. Two or three or four, perhaps.

Q. After you came back were you the only representative of your company attending those meetings, as long as they were attended in 1908 and 1909, or did some one else attend with you?

A. I went alone to those meetings.

Q. You are speaking of that particular committee now?

A. Of the Sheet Committee meetings; yes, sir.

Q. And at those meetings were representatives of those who were your competitors in the making and selling of sheets present?

A. Many of them, yes.

Q. State who was there, and what companies they represented.

A. Do you mean a complete list?

Q. No, I mean as far as you can remember, of course. I mean complete as far as you can recall now.

A. I could not give it to you in anything like complete form; I know there were probably thirty to forty people there. Most of the sheet producing companies were represented, but not all of them.

Q. But most of your competitors in that line of business were there, were they?

A. Most of them, yes; not all.

Q. The larger makers were there, were they?

A. Yes.

Q. Were any of the subsidiaries of the Corporation represented there?

A. The American Sheet & Tin Plate Company.

Q. By whom?

A. I think they were represented by Mr. Pargny and Mr. Andrews. My recollection is that Mr. Bray may have represented them on occasions, but I am vague about that.

Q. Who presided over those meetings?

A. Mr. Campbell.

Q. He acted as chairman?

A. Yes.

Q. At those meetings did you enter into any written agreement about the maintenance of prices?

A. No, sir.

Q. Did you enter into any formal agreement of any character about the maintenance of prices?

A. No; it was well understood that we could not agree.

Q. You understood that you could not?

A. Could not enter into any agreement or understanding.

Q. And you had no agreement that involved any question of penalty?

A. None whatever.

Q. And you put up nothing by way of penalty or forfeiture?

A. Nothing.

Q. Tell me, Mr. Lukens, when you met, just what you would do, just give the facts as they actually transpired at those meetings?

A. As I recall the proceedings at these meetings it was about as follows: There would be a discussion as to market conditions, which would be reflected rather accurately in the extent of the operations of the various mills that were represented there. There would be a discussion as to the price or prices at which our products were being sold. There would be, of course, differences of opinion, and there would be differences in the prices at which we were selling. That would be brought out. The meeting having in that way got, each man for himself, a composite photograph of the condition of things, we would then, each for ourselves, make a statement as to what the policy of our companies would be with reference to the sale of their products. There we stopped.

Q. And you would get this by some one announcing what he was going to sell his product at?

A. For example, I would state that it would be the policy of my company to sell its goods at a certain price.

Q. Would others make the same statement?

A. A statement as to the selling policy of his company would be made by each man who was there.

Q. Well, now, Mr. Lukens, were these announcements, speaking generally and not in exceptional cases, but generally speaking, were they of the same price?

A. Generally speaking they were.

Q. Now, when you made that announcement——

A. (Interposing) You see I qualified that.

Q. (Continuing) When you made that announcement what was the object of your making it? Did you make it in good faith?

A. I did.

Q. Did you make it for the information of the others who were there?

A. I did.

Q. Did you make it with the expectation that they would accept it in good faith?

A. I hoped they would and I hope they did.

Q. Take the announcements of others, I do not mean every one, but generally speaking, did you accept their statements in the same way?

A. If you say generally speaking, I will say yes.

Q. There may have been some that you had some question about? Is that what you have in your mind?

A. You are putting me in an awkward position in reference to some of my competitors.

Q. I am not going to ask you for the names, and I am not going to unnecessarily embarrass you.

A. Yes; there were frequently statements of policy made which I myself never took seriously.

Q. What was the expectation on your part as to the continuation of that policy at that price, until the next meeting, or until something transpired to call another meeting?

A. Until you changed your mind. You were under no obligation to continue it.

Q. I understand; there was no contract to continue; but what was the expectation on your part as to a continuance?

A. You mean on my part?

Q. Yes, on your part?

A. Well, on my part it was not an expectation, but a hope that it would last as short a time as possible.

Q. Well, you mean that you hoped that somebody would break it?

MR. SEVERANCE: I object to that question. I do not think the question is in good form, "somebody would break it." I object to that as indefinite.

MR. DICKINSON: I do not know what is in his mind.

MR. SEVERANCE: You used the expression "would break it." That implies there was some contract. The witness explained there was no such thing.

By MR. DICKINSON:

Q. Just explain it now. We want to get at what was in your mind.

A. What was in my mind was this, that when I made a statement, that we expected to sell our product at a given price—it so happens that the price at that time was so low that it was quite a painful process to part with our merchandise, and that is what I mean when I say I had no expectation one way or the other—I merely hoped that it would continue as short a time as possible; in other words, that there might be some improvement in business, and that we might see an advance in the market which would give us a reasonable profit at least on what we had to sell.

Q. If there were such advance, would you have another meeting to consider that?

A. I do not know. We never had advances. We had only declines.

Q. Now, Mr. Lukens, how long did you expect that policy to continue? Did you expect it to continue until notice was given by the other parties, or until another meeting?

A. No, sir; there was no obligation of any kind placed on any one.

Q. Yes, I understand there was no obligation, and I am eliminating that, but I just want to know, when you got

there and went through all that performance that you have described, did you expect to go out and turn the corner and sell at a different price from what you had announced, without giving any notice?

A. I did not, no.

Q. Did you expect the others to expect that you would?

A. I repeat that I hoped they did not expect I would.

Q. Did you make the announcement with a view of their receiving any such impression as that?

A. You mean that I would do otherwise?

Q. That is, what your policy of selling was going to be?

A. I expected them to believe what I said.

Q. And how long did you expect them to suppose that that policy would last? Would it be until you gave notice of a change?

A. Until we wished to do otherwise. We were free to do otherwise whenever we felt like it.

Q. You were absolutely free, were you?

A. Perfectly so.

Q. But when you made that announcement of your policy did you expect to do otherwise without giving them some kind of a notice?

A. I did not, no.

Q. Did you expect them to so accept your announcement?

A. I hoped—I do not think a man has a right to expect to be considered truthful by everyone, but I did and do hope that the gentlemen who were at those meetings believed that I was telling the truth.

Q. When you said what?

A. When I said we would sell our products at any price or on any basis.

Q. The basis being the one that you announced there?

A. The basis being the one that I announced there.

Q. How long did you expect them to suppose that you were going to continue that when you made that statement?

A. There was no time fixed.

Q. Wasn't it the understanding that it would be until some notice was given or until the next meeting?

A. I do not recall any such distinct understanding as that, no.

Q. Well, I am not talking about a distinct understanding or distinct agreement; I am asking you what reliance you placed upon those statements and what reliance you expected them to place upon your statement?

A. I expected—I again say "hoped" rather than expected that they placed entire reliance on my statement. I placed entire reliance on the statements of some of the gentlemen and none whatever on the statements of some of the others.

Q. Were most of your competitors in that business, the larger competitors, reputable men, upon whose good faith you did rely?

A. Most of them, yes.

Q. Now, you relied on them, did you, and gave full faith to their statements?

A. I hate to say yes, and I hate to say no.

Q. I do not care what you hate to say. I want you to say——

A. But let me explain. Even the people in whom I personally—through personal acquaintance—used to place the greatest reliance, I am afraid, did not always do exactly as they said. Therefore your question is a hard one to answer, as you can see.

Q. I will put it this way: Did you generally expect a majority of your competitors, whom you have said were reputable men, to do in accordance with their announcement, whatever it was?

A. Again, I did not so much expect as hope.

Q. Now, did you expect that when all of these manufacturers of sheet steel took the trouble to go to Pittsburgh, and when you went to Pittsburgh and discussed trade conditions and then made announcements as to prices and as to policies, as to selling at those prices, and most of them making the same announcement as to prices, I want to know if you expected that without any change in business conditions all those people would go and sell at a different price from the policy that they had announced?

A. No, I did not expect that they would do that. Many of them, however, did.

Q. Now, Mr. Lukens, you had an object in going there, didn't you?

A. My company had an object in sending me.

Q. They had an object in sending you?

A. Yes, sir.

Q. And you went there to represent your company?

A. Yes.

Q. And you went there to meet your competitors in business?

A. Yes.

Q. And you went there to talk about prices, did you not?

A. Yes.

Q. And you made an announcement of prices?

A. I did; and they did.

Q. And the others did?

A. Yes.

Q. And before you concluded, generally, the most of them announced the same policy and the same price?

A. Most of them.

Q. What was the object of that meeting? Was it not to steady prices and keep them steady, so far as you could?

A. Yes. The object of those meetings, as I understand it, was this: To try to prevent, by an appeal to the judgment and common sense of the men who were there, without placing them under any obligation whatever, a complete collapse in the steel business that threatened to follow the collapse of things in Wall Street in the fall of 1907. It would have been a particularly serious time to have a rapid collapse of the market. It threatened, and it threatened seriously, and I think the thinking men—even if they do not all think, some of them do, in the steel business—felt that it was almost a necessity to try to prevent complete demoralization, which would have been serious, not only for the manufacturers themselves, but for their customers.

Q. And that would come, would it not, from unrestrained competition?

A. Well, I think we had unrestrained competition; but, by

appealing to the judgment and sound sense of those men, it was to some extent prevented; not entirely.

Q. As a matter of fact, between those meetings is it not true that a great many of those men observed and sold at this common price that had been announced by a majority of them?

A. I do not know what they did. They said they did.

Q. And you did, did you?

A. We did, largely.

Q. And you told them you did?

A. I am afraid I did, yes.

Q. Then you told them that you were doing what you were not doing, did you?

A. When we failed to do it, if I had an opportunity, I told them everything that we had done.

Q. If you had an opportunity?

A. Yes.

Q. But I understood you to say a while ago that sometimes you told them that you were observing that policy, when in fact you were not. Is that true or not?

MR. SEVERANCE: He didn't say that.

THE WITNESS: No.

MR. DICKINSON: He did not say it in those words.

THE WITNESS: I distinctly did not say that.

By MR. DICKINSON:

Q. What did you say?

A. What I mean to say, or to have you understand, is that when I announced that our policy would be to sell at, let us say for example, a cent and a half a pound, if by mistake, or simply because we changed our minds, we wanted to sell at some other price, if I had an opportunity I told those gentlemen, as a matter of merely being decent, that we had done so.

Q. Did you tell them beforehand that you were going to do so?

A. How could I tell them before we changed our minds?

Q. Not about changing your minds—but about the actual selling; did you notify them that you had changed your mind and were going to sell at a lower price than your policy that had been announced?

A. No; we would do it and tell them afterwards.

Q. Did you always do that?

A. Did we always tell them?

Q. Did you always do it and tell them afterwards, and never tell them before?

A. We never told them before. How can you anticipate a change of mind? I cannot.

Q. Now, Mr. Lukens, did it not occur in those meetings that it would be brought to their attention that some one had sold at prices contrary to the policy that such person had announced.

A. Oh, at all times prices that are quoted to people are more or less currently reported. That is true at all times and in all seasons.

Q. You are not answering my question.

A. I am trying to do so.

Q. I do not say that you are not, but I say that you are not answering it. I asked you if at those meetings there were not occasions when attention was called in the meetings to the fact that some members of that committee had sold in the interim at prices different from what they had announced as their policy as to prices?

A. Oh, yes; that happened with unfortunate frequency.

Q. What would be said? How would the matter be treated?

A. Usually the Chairman would say: "It is quite evident that one or more of the gentlemen who stated their selling policy have changed their minds."

Q. And that would be a subject matter of discussion by the committee, would it?

A. To that extent.

Q. To that extent?

A. Nothing more to discuss.

Q. Would not questions of particular individuals, who they were, be discussed?

A. Not in the meetings themselves. It might have been known, but it was not a pleasant thing to tell a gentleman that he——

Q. Do you say, Mr. Lukens, that at no meeting at which you were present any question was ever taken up in regard

to some particular member of that committee having sold at a price different from what he had at some previous meeting announced as his policy?

A. Oh, I think I recall one or two instances in which it narrowed down to some one case.

Q. Did you not say a while ago that there were none?

A. I did not intend to; but, as I say, that was not the character of the meetings—to treat them in an individual way.

Q. I am not speaking, now, of any general character of the meetings, but——

A. My recollection is that in one or two cases it was discussed as to an individual who stated that he had sold at a different price from the one at which he had previously stated he would sell.

Q. Haven't you on such occasions heard such individuals deny, and say that it was a mistake?

A. I have heard them give almost every—yes, I have heard them say just that, that they had made mistakes.

Q. They had made mistakes?

A. Yes.

Q. And at other times haven't you heard them deny the fact that they had sold at a different price than their policy had been?

A. No; I don't recall that.

Q. You simply do not recall it?

A. No, not as a separate and distinct fact.

Q. Do you recall it at all, separate or distinct or compounded or associated or in any other way?

A. I think I must recall it in one of those ways.

Q. Now, what do you recall?

A. There are so many ways.

Mr. Severance: Is that your answer?

Mr. Dickinson: That is his answer.

Mr. Severance: I thought he was joking, and I wanted to know if that is his answer.

The Witness: I did not mean to joke. I beg your pardon. You are asking me to state something specifically that I do not recall specifically. How can I answer it?

By Mr. Dickinson:

Q. I do not know how you can answer, and I am not telling you how you can answer anything.

A. I cannot; I cannot recall all the pros and cons of six or eight or ten meetings. I have not the least doubt that it happened.

Q. I am not asking you about your doubts; I am asking for your knowledge.

A. My knowledge on that question is *nil*.

Q. You cannot, then, state that you recall any incident at any of these meetings where complaint was made against any member of that committee, or where attention was drawn to the fact, in respect of any member of that committee, that he had sold at a price different from that that had been announced as his policy as to price?

A. The matter was not treated in that way; it was not treated in an individual way. Complaints were not made against specific people.

Q. When you say complaints were not made——

A. (Interposing) You used the word complaints.

Q. (Continuing) I do not want to have any misunderstanding about that word. Do you mean to say that attention was not called in any way to acts of any one by name, or the company by name?

A. I have already stated that I recall one or two cases where the individual company was named.

Q. You do recall those cases, do you?

A. Yes.

Q. One or two?

A. Two; possible three; I cannot recall or give you that exactly.

Q. So that it is one or two or possibly three. Well, when you say two, do you know the names of them?

A. I mean that it was the exception, absolutely the exception and not the rule.

Q. And when you said you recall the cases, do you mean you recall the meetings at which this occurred?

A. I recall the individuals.

Q. You recall the individuals. Now, then, let us know

what you rememebr about those particular cases; just give us the facts?

A. Merely that in the discussions of the market conditions it would be brought out, it was invariably brought out, that people who had stated they would do one thing had done another, and in those one or two cases those gentlemen simply explained it.

Q. Well, how?

A. As individuals.

Q. How did they explain it? What explanation did they give?

A. It was a change of heart.

Q. A change of heart?

A. Sometimes it was a change of mind; sometimes they said they made mistakes, the mistakes of salesmen.

Q. I want you to give me the two instances you recall, those that you referred to when you said there was sometimes a change of mind.

A. Well, that is what they would say.

Q. Take those two that you say you remember. What were the explanations given? Give them separately, now.

A. I don't recall.

Q. Were they the same explanation?

A. I do not believe so; it was usually a mistake, a mistake of the salesman, a mistake of adding——

Q. You said——

Mr. Severance: Let him finish the answer.

The Witness: (Continuing) They would say it was a mistake. Naturally a man does not like to find himself in a position of that kind. Whether it was a mistake or not, that was the way it was usually handled, a mistake of the salesman or a mistake in adding the freight rate.

By Mr. Dickinson:

Q. You are speaking generally—the general run of cases that were brought to the meetings; not those particular two?

A. Those two?

Q. Not only those two?

A. Not those two particularly.

Q. Well, there were others, were there?

A. Oh, the market was more or less ragged all the time; there were a lot of people who did constantly things which they had said would not be their policy.

Q. I am speaking of only those things that were brought forward in the committee; are you speaking of that? You understand I am talking about that?

A. Yes, sir. By the—well, let me have that again.

(The question was repeated by the stenographer.)

Q. (Continuing) You said something about the market, the ragged market, and I am asking you about things that were brought forward before that committee.

A. I mean in the discussion of market conditions in the committee at the meeting, it was constantly being brought out that we were in that condition.

Q. I am speaking now, Mr. Lukens, of questions that arose in that committee in regard to members of that committee having sold at prices different from prices which had been announced by them at some previous meeting.

A. Yes, sir.

Q. Now, do you say or not that it was customary or general in respect to those, for them to explain that they had made a mistake, or something of that sort?

A. No, sir, it was not. The matter was not treated in an individual way at all, except in a few instances, as I have already stated.

Q. You mean to say that when you were there, throughout all the meetings, that there were only two or three individual instances treated? Do you state that as a fact?

A. They were not treated; they were merely talked over in the room.

Q. Well, I won't dwell on the question of "treated." Do you mean to say that at all the meetings at which you were present there were only two or three instances where attention was brought to the fact that members of that committee had sold at prices different from the prices that had been announced by them at a previous meeting?

A. If you mean individuals, I recall only one or two cases where any names were used. If you mean the committee as a

whole, I think that that was true of every meeting that I ever attended.

Q. What was true?

A. Why, variations from the prices at which these gentlemen had stated it would be their policy to sell.

Q. Were brought up, talked of?

A. Talked of, yes.

Q. Explanations given?

A. Not as a rule.

MR. LINDABURY: He has answered you about seventeen times, Judge.

By MR. DICKINSON:

Q. Leave out "as a rule." State whether it was done frequently.

A. You mean explanations demanded of individuals?

Q. I did not say "demanded of them"; I never used any such term as "demanded of them" at all. Were explanations made upon attention being brought to the fact in some way before the committee?

A. Explanations were not made, as a rule.

Q. Were they made at all?

A. In the few instances which I recall, they were made, and they were made in the way that I have stated.

Q. Are those the only ones that you recall by name?

A. The only ones.

Q. Do you mean to say that those were the only ones that occurred, and that you cannot recall the names of others, or that you know those were the only ones?

A. I know those were the only cases in which I personally, from being present at the meeting, knew the name of the gentleman, who, having made a statement that he would do one thing, had done another.

Q. Other persons may have known the names, may they not, and you not?

A. I do not know what other people knew.

Q. You are only speaking, then, of the names that you personally knew at these meetings?

A. I cannot speak of anything else, no.

MR. SEVERANCE: How could he know?

MR. DICKINSON: There might be something else.

By MR. DICKINSON:

Q. Did you attend any meetings after 1909?

A. I attended some in 1911, I think.

Q. 1911?

A. Yes.

Q. And in 1910?

A. I cannot place it by years.

Q. In the fall of 1910 didn't you attend some meetings?

A. I am not certain about just whether it came in 1910 or the early part of 1911.

Q. How many meetings did you attend during that period?

A. I will have to guess at it. Shall I guess?

Q. I do not care for your guessing. I want facts.

A. I do not know how many I attended.

Q. What was the last one you attended?

A. I do not know when it was.

Q. Who were present at it?

A. I could not remember all their names.

Q. Do you remember any of them?

A. Mr. Campbell was there, I think.

Q. Who else?

A. I think Mr. Pargny was there; perhaps Mr. Andrews of the Sheet Steel Company. I think there were representatives from most of the sheet and tin plate companies; not all of them.

Q. When did that take place?

A. I do not remember.

MR. DICKINSON: That is all.

REDIRECT EXAMINATION

By MR. SEVERANCE:

Q. Did or did not the gentlemen present at any of these meetings state publicly in the meeting that they would not make any agreements as to prices?

A. I have heard such statements.

Q. Mr. Lukens, I call your attention to Government Exhibit (Walker) 248, being diagram No. 6, headed "Average monthly prices of tin plate and pig tin at New York, and black sheets at Pittsburgh, 1895 to 1911"; the black line, as you will see, is the sheet line. I call your attention particularly to the line for 1907, and the same line for 1908, the black line.

A. These are months.

Q. Yes; and the right hand side are the prices per hundred pounds. You will observe that according to this diagram the price of black sheets was uniform from the first of January, 1907, or in fact from November, 1906, down to the month of December, 1907, the price being $2 and I should say fifty cents, but anyway between 40 and 60 cents, and from the 1st of February, 1908, down to after the 1st of February, 1909, it was uniform at $2.40. You observe that, do you?

A. Yes, sir.

Q. What is your recollection as to whether Alan Wood & Company sold sheets at the uniform price of $2.50 during the period to which I have just called your attention, from the end of 1906 to the end of 1907?

A. We did not sell at any uniform price.

Q. Was the ruling price obtained by you and other manufacturers higher or lower at different times during that year than as shown on this diagram?

A. I cannot speak for other manufacturers. Our prices were higher than that.

Q. Did they vary during the year?

A. Very much, I think.

Q. Were they higher all the time during that year than $2.50?

A. I think our prices were considerably higher than that throughout 1907.

Q. Did Alan Wood & Company sell at the uniform price of $2.40 during the year 1908, from February to December?

A. No, sir; we never had a uniform price for any year.

Q. Would you say that the price you received for your product varied during that year?

A. Undoubtedly.

Q. Did it range higher or lower than $2.40, or both?

A. I should say both.

RECROSS EXAMINATION

By Mr. Dickinson:

Q. Mr. Lukens, I do not know that your attention was called to the fact that these lines on this chart do not show daily prices, but show average prices.

A. Monthly?

Q. Average monthly prices.

A. Yes, I noticed that.

Q. Do you know, and can you give, the average monthly price at which you sold for the month of January, 1907?

A. No, sir; I can not.

Q. Can you give it for any one of those months?

A. No, sir.

Q. Have you examined any figures recently?

A. No, sir.

Q. You can not give the variations?

A. Oh, no; that would be impossible, from memory.

Q. Do you undertake to state that you know that these average prices here were not the average monthly market prices as quoted?

A. Oh, no; I don't say that.

Q. And you can not give your own prices for any of those periods?

A. I do know that we did not sell our black sheet at an average price of either $2.40 or $2.50, whichever is stated there in the year 1907.

Q. Was your price constantly above it?

A. I think it was above it during the whole of the year 1907, with the possible exception of a very short time just at the end of the year, after this collapse in Wall Street.

Q. There was a fall in December, 1907, was there not?

A. Yes, but I do not know whether our black sheet price went down as low as that even then.

Q. These are Pittsburgh prices here. Do you know what the Pittsburgh prices were?

A. No, I do not remember. I suppose if those are Pittsburgh prices, that that is so.

Q. You have only been speaking of prices at which you sold, and you can not give what they were?

A. Oh, no; I could not give the average monthly prices. That would be impossible.

By Mr. Severance:

Q. You sell in competition with Pittsburgh?

A. Yes.

Mr. Severance: That is all.

Mr. Dickinson: That is all.

MADISON F. COLE

was called as a witness on behalf of the defendants, and being first duly sworn, testified as follows:

DIRECT EXAMINATION

By Mr. Reed:

Q. Colonel Cole, where do you live?

A. Newnan, Georgia.

Q. What is your occupation?

A. Manufacturer.

Q. Manufacturer of what?

A. Boilers, engines, tanks and towers.

Q. How long have you been in that business?

A. The business was established in 1854. We are in our sixtieth year.

Q. How long have you yourself been connected with it?

A. All my life.

Q. That is not very long, is it, Colonel?

A. I am fifty-seven years old.

Q. What is the name of the company?

A. R. D. Cole Manufacturing Company.

Q. What kind of steel materials do you purchase for use in your business?

A. Tank steel, boiler steel, shapes, sheets, bars and tubes.

Q. Any structural shapes?

A. Yes, sir.

Q. When you speak of tank steel and boiler steel, you mean plate, do you not?

A. Yes, sir.

Q. From what companies have you been buying your plates in the past ten years or so?

A. The Lukens Iron & Steel Company; Worth Brothers; the Tennessee Coal, Iron & Railroad Company.

Q. Do you get any from the Central Company of Harrisburg?

A. The Central Iron & Steel Company at Harrisburg, yes.

Q. Any others?

A. Perhaps a few from Jones & Laughlin, Pittsburgh.

Q. How do you buy these plates, Colonel Cole; do you buy them on annual contracts, or do you buy on contracts for a definite tonnage?

A. Why, we usually make quarterly contracts.

Q. And before you let these quarterly contracts do you seek bids from these different manufacturers that you have named?

A. Yes; I would invite sufficient bids to get competition.

Q. Are you usually successful in that?

A. I think so.

Q. How do the prices that you get in response to particular inquiries range? Do they vary or are they uniform in price?

A. There is usually a little variation.

Q. About how much per ton?

A. $1 to $3 a ton.

Q. How long has that been so, Colonel Cole?

A. Pretty nearly ever since I have been buying.

Q. It has been intimated that around the years 1900 up to 1904 there was a pool in plates, boiler plates and tank plates.

MR. COLTON: Intimated?

MR. REED: I do not think that is overstating it, to say it is intimated. I do not want to exaggerate your statement.

THE WITNESS: I have heard it was a gentleman's agreement.

By MR. REED:

Q. Regardless of what people were in this thing, and whatever it was in those days, there was a price that was generally reported to be the agreed-on price, was there not?

A. Yes.

Q. Was there any competition for your business in those days?

A. Yes.

Q. You do not mean to say that those gentlemen would break their agreement, do you?

A. I had competition all right.

Q. Did that competition go so far as to shade prices, Colonel Cole?

A. Yes.

Q. Was that always done directly?

A. What do you mean by directly?

Q. Were the prices always reduced in the contracts; that is, were the contract prices stated lower than the pool prices, or was the cut made indirectly? In other words, give us an illustration of how they cut prices.

A. Well, I always found that the steel people, like anyone else, were willing to trade. I sometimes had to make the proposition. I remember in one instance during that period I suggested to a mill man that he establish a warehouse in my town and allow me a dollar a ton for handling his plates, and he agreed to it.

Q. You were going to be the warehouse man, were you?

A. Yes.

Q. Was there any other consumer of plates in Newnan except yourself?

A. No, sir.

Q. There was no "Heathen Chinee" in that business either, was there?

A. I did not meet any.

Q. Now as to structural material; from what manufacturers have you been buying your structural material?

A. The Phoenix Iron Company, Jones & Laughlin, Cambria Steel Company, the Eastern Steel Company, very little from the Eastern Steel Company.

Q. Did you ever get any from the Pennsylvania Steel Company?

A. Yes, recently, in the past eighteen months.

Q. Do you buy that on the same kind of contracts that you buy plates?

A. Yes.

Q. Do you find any variation in the quotations that are made to you by these different makers?

A. Yes.

Q. How long has that been so?

A. It has nearly always been so.

Q. Even in pool times in structural shapes?

A. Yes.

Q. About what tonnage of structural shapes do you buy each year?

A. 1,200 to 1,500 tons.

Q. I do not believe I asked you about your tonnage of the different kinds of plates either; about what tonnage do you buy of plates, boiler and tank plates?

A. 1,500 to 2,000 tons.

Q. You buy tubes, too?

A. Yes.

Q. About what tonnage annually?

A. Six or eight hundred tons.

Q. From what companies do you buy your tubes?

A. The National Tube Company, Monongahela and Spang, Chalfant.

Q. Do you ever get any from the Reading Iron Company?

A. I have not for several years.

Q. Did you ever get from them?

A. Yes, I have used some of their tubes.

Q. Do you get bids from these different concerns that you have named, in tubes?

A. Yes.

Q. Where do you get the bulk of your business in tubes just now?

A. The National Tube Company.

Q. For what reason?

A. Well, they usually make a competitive price to me. The bulk of our standard boilers, however, are sold to one company who manufacture gins, and for a number of years they had a great deal of trouble with their boilers, especially in the Mississippi territory on account of the tubes pitting, and when this new tube of theirs was brought out——

Q. (Interposing) You mean the new tube of the National Tube Company?

A. Yes, we adopted it. I think it is called the Spellerized; that is merely a name.

Q. That is named for Mr. Speller, is it?

A. Yes.

Q. Who is he?

A. I think he is connected with the Corporation.

Q. He is one of the engineers of the National Tube Company, isn't he?

A. Yes.

Q. How long have they been making this Spellerized tube, if you know?

A. We have been using them for six or seven years.

Q. What is the advantage of them?

A. They do not pit so badly in the Mississippi water as the standard lap-welded tube, and in selling the boilers to this Continental Gin Company we agreed to use that tube. I am sorry to have to say that; I hope none of the sales agents are present; they may take advantage of that next season.

Q. So that the quality of those tubes has been as important as the price, hasn't it?

A. Yes. In buying tubes, plates and sheets we are obliged to take into consideration both quality, service and price.

Q. How about the quotations on tubes from these different concerns? Have the other two companies tried to cut the National Tube out of that business?

A. Yes.

Q. Have they been trying that for any considerable period?

A. Yes; and on a few occasions they have succeeded.

Q. How have they gone to work to get that business away from the National Tube Company?

A. Personal solicitation.

Q. Making any reduction in prices; have they tried that?

A. Well, they named a better price than the National Tube Company.

Q. Generally speaking, how have the quotations on tubes ranged? Have they been variant or uniform?

A. They were more nearly together than any products we used.

Q. Has there been any competition in them?

A. Yes, sir.

Q. Do you buy some bars, too?

A. Yes, sir.

Q. About what tonnage annually?

A. 300 tons of bars.

Q. Of what companies?

A. Most of our bars are bought in the South, in the Birmingham district.

Q. From what company or companies?

A. Tennessee Coal, Iron & Railroad Company; Southern Steel Company; Knoxville Iron Company.

Q. Do the quotations you get from those companies on bars vary, or are they uniform?

A. They vary.

Q. How much do they vary, Colonel Cole?

A. Sometimes as much as $4 a ton.

Q. How long has it been that the prices quoted to you by these bar makers have been variant?

A. They have always varied.

Q. You have always had competition in that, have you?

A. Yes, sir.

Q. Pretty aggressive competition?

A. Yes, sir.

Q. Do any of the northern bar makers ever get into your district?

A. Yes, sir.

Q. Which ones?

A. East we buy some plates and bars in Pittsburgh.

Q. Do Jones & Laughlin ever sell any?

A. Yes, sir. They are the only people, I believe, we have ever bought any bars from in Pittsburgh.

Q. How about sheets? What are your sources of supply for sheets?

A. We buy from the Tennessee Coal, Iron & Railroad Company; Alan Wood Iron & Steel Company; J. Wood Brothers & Company; Portsmouth Steel Company.

Q. Do you buy any from the American Sheet & Tin Plate Company?

A. No, sir.

Q. Why not?

A. I never could get together with the American people. When their prices were in line, they could not ship, and when their prices were not in line——

Q. I suppose that was the end of it, when their prices were not in line?

A. Yes.

MR. LINDABURY: I think you ought to let him work that out.

MR. REED: That conclusion would seem obvious, even to a lawyer.

MR. DICKINSON: That was so obvious I did not even object. Ask him about the quantity of sheets, will you?

MR. REED: I will.

By MR. REED:

Q. Judge Dickinson is impatient to get the quantity of your sheet purchases.

A. About 300 tons.

Q. How have the quotations that have been made to you by the different sheet makers ranged?

A. I found a variation in the price there, like everything else. There was a time when they all quoted about the same price, but as I said about plates, I found them willing to trade.

Q. And they were anxious enough to get your business to make concessions to get it, were they?

A. Yes, they always contended that they wanted the bus-

iness, because there were more red lines on our ledger account than on most of the accounts in their books.

Q. And that appealed to them?

A. It always seemed to me to shade the standard price, as they call it.

Q. And of recent years has there been any uniformity in their bids, or have they been variant?

A. They have varied right along.

Q. Colonel Cole, in any of these steel products that you buy has there in recent years, say the last five or six years, been any evidence of a combination to maintain prices?

MR. DICKINSON: That is objected to as calling for a conclusion of the witness, and not on a shown statement of facts.

By MR. REED:

Q. Any evidence that you yourself have observed?

MR. DICKINSON: The same objection.

THE WITNESS: Yes.

By MR. REED:

Q. What has that been?

A. They all quoted the same price.

Q. When was that?

A. I could not recall the years.

Q. How many years ago was it?

A. About six, possibly.

Q. And in what products?

A. How is that?

Q. In what products?

A. Most all the products that I use.

Q. And in those days, would you find these companies willing to cut from their price?

A. Yes.

Q. Do you think you got the benefit of competition in the purchases you have made of these different products?

A. Yes, sir.

Q. For how long past has that been so?

A. Ten years.

Q. Do you believe that has been genuine competition?

MR. DICKINSON: Objected to as calling for a conclusion on the part of the witness, and not a statement of facts.

THE WITNESS: Yes, sir.

MR. REED: Cross examine.

CROSS EXAMINATION

By MR. DICKINSON:

Q. You say the red lines cut considerable figure in getting your prices?

A. That is what the selling agents say.

Q. Although these prices were quite generally pretty uniform for long periods, you could always get somebody to give you a lower price; is that it?

A. Nearly always succeeded in doing that; yes, sir.

Q. And that was by special bargaining on your part?

A. Yes, sir.

Q. Now, these pipes that you used for boilers: After you made that contract about six or seven years ago—who was it made with? I have forgotten.

A. The Continental Gin Company.

Q. You had to supply boilers with that particular kind of tubing, didn't you?

A. Yes, that was the understanding; at an equal price, of course.

Q. They built up a trade on that, didn't they?

A. I do not know that they built up a trade on it; they had a good trade.

Q. Their trade was built up on the character of their boilers, was it not?

A. I do not think their trade was built up on the character of boilers.

Q. People bought from them, didn't they, because they wanted their make and were satisfied with it?

A. Yes, sir.

Q. There was something about either the construction or the material, was there not, that appealed to people, after the market got to understand and know what product they made?

A. I suppose so. Of course I am not familiar with their

sales end of it. I only know that I sold them the boilers and agreed to use this special tubing.

Q. Since you made that agreement have you ever departed from that?

A. One year.

Q. What year was that?

A. I cannot recall, sir.

Q. And for the whole year or just a part of that year?

A. For the whole year.

Q. And you do not know how long ago, in fact, that was?

A. No, sir; I do not recall the year.

Q. With the exception of that one year, you always wanted that particular tubing for the boilers?

A. Yes, sir.

Q. And that was the only way you used tubing, was it, for these boilers?

A. Yes, sir.

MR. DICKINSON: That is all.

MR. REED: That is all.

VICTOR MAUCK

was called as a witness on behalf of the defendants, and being first duly sworn, testified as follows:

DIRECT EXAMINATION

By MR. REED:

Q. Where do you live, Mr. Mauck?

A. Norristown, Pennsylvania.

Q. In what business are you?

A. We are manufacturers of galvanized range boilers, plate and sheet construction of various kinds, tank construction, and so forth.

Q. What is the name of your company?

A. John Wood Manufacturing Company.

Q. What is your office in that company?

A. President.

Q. How long have you been president of it?

A. Since 1901, or 1902; I am not quite clear on that.

Q. Prior to that time what was your office with that company?

A. I was in all capacities from office boy up, I think—superintendent and so forth.

Q. Have you been familiar with the purchases made by that company since you became president in 1901 or 1902?

A. I have.

Q. That company is in Conshohocken, is it not?

A. Yes, sir.

Q. In the manufacture of boilers and tanks I suppose you buy large quantities of plates, do you not?

A. We do; quite a quantity.

Q. You buy sheets, too?

A. And sheets.

Q. About what tonnage of sheets and plates does your company buy each year?

A. Well, I judge about 8,000 tons; something in that neighborhood; maybe a little more or a little less.

Q. What percentage of that tonnage is thirteen gauge or lighter?

A. About 60 or 65 per cent.; that is, thirteen and lighter, you say?

Q. Yes.

A. That is right.

Q. From what companies do you buy the lighter tonnages?

A. We buy from the Alan Wood Iron & Steel Company, the American Sheet & Tin Plate Company, the Youngstown Sheet & Tube Company, the Sharon Steel Hoop Company, J. Wood & Brothers Company. That about covers it, I think.

Q. Do you buy on annual contract, or do you buy specified tonnages?

A. We buy in specified tonnages usually. We do not always buy on contract. Oftentimes we buy just on the market. It depends on what the conditions are as to whether we contract or not.

Q. And from what companies do you buy your heavier plates?

A. The Lukens Iron & Steel Company and Worth Brothers Company.

Q. Any others?

A. No.

Q. From the Glasgow?

A. We buy from the Glasgow some, yes.

Q. Where is the Glasgow Iron & Steel Company?

A. Their headquarters, or their plant, is at Pottstown, I believe.

Q. Taking first the lighter sheets or plates that you buy: Do you ask quotations from these companies that you have named before you award an order?

A. We do, ordinarily.

Q. How do those quotations range in price?

A. There is usually quite a variation. It depends altogether on the market conditions. If the market is bad there is usually a wide variation in price. If everybody is filled up with orders, their prices are closer. The prices show variations all the way from $3 to $6 a ton. Sometimes the quotations varied as much as $6 a ton.

Q. How long has it been that quotations made to you have varied in this way?

A. Well, to my recollection prices have always varied. I have no distinct recollection of any condition to the contrary.

Q. So far as you have been able to observe, has there been active, aggressive competition for your business?

Mr. Dickinson: This is objected to as calling for a conclusion of the witness.

The Witness: Yes.

By Mr. Reed:

Q. Do you follow the quotations on sheets and plates as published in the Iron Age?

A. Yes, sir; we follow them as a matter of interest. We do not consider a quotation in a trade paper as having much

bearing on actual prices, but we of course like to keep informed.

Q. Why not, Mr. Mauck?

A. Because they do not represent the market.

Q. How about your own purchases? Do you always buy at the Iron Age prices?

A. No; I very rarely know what the Iron Age price is as compared with the price at which we buy. Iron Age prices we see from week to week. These things are published from week to week and we look them over. We buy at periods sometimes three months apart. So that, when we make a purchase, we usually try to see how much better we can do than the published prices. That is about the only guide they are to us.

Q. How much better can you usually do than the published prices?

A. It depends altogether on the situation in the business. If the mills are filled up, sometimes we have to pay more than the published price; sometimes we pay very considerably less.

Q. In the heavier sizes of plates do you get competition?

A. We get competition, I guess, in plates too, but there does not seem to be the range in prices on heavy plates. The quotations, for some reason or other, are closer. I do not know whether it is because they are working closer to cost, or why it is; but the range seems to be very much narrower in the heavier plates.

Q. Do you ask the Carnegie Steel Company or any of the United States Steel Corporation's subsidiaries to bid on your plate requirements?

A. Not very often on plate requirements, because deliveries on heavy plates from the west are such that we can hardly entertain western quotations on plates. They get filled up with these car orders, and those things, and their deliveries are usually pretty bad; so we depend on the local people.

Q. When you speak of the west you mean Pittsburgh?

A. I mean the Pittsburgh district.

Q. So that most of your supply comes from these eastern Pennsylvania mills?

A. From the eastern Pennsylvania mills.

CROSS EXAMINATION

By Mr. Dickinson:

Q. Take plate, for the year 1912: What tonnage of heavy plate did you use?

A. In 1912? I cannot give you the figures. I should say probably 500 tons; maybe not that much, but pretty close to it. About 500 tons, I guess.

Q. How long has it been at that? Take the years back to 1901. How far back would 500 tons represent your consumption, or was it more?

A. No; our consumption of plates has been increasing.

Q. In 1901 what was it?

A. In 1901 it may have been 50 or 60 tons. Our business in that line has been growing.

Q. That would be a very small amount of plates for a manufacturer, would it not?

A. A very small amount, yes.

Q. Do you recall, in 1901, 1902, 1903, 1904, 1905 and 1906 from whom you solicited bids on plates?

A. I should say from Lukens and Worth.

Q. Just those two, as far as you can recall?

A. I think so, yes. Our purchases then were not important enough for us to——

Q. When did they get up to 500 tons?

A. I say in 1912 we used probably 500 tons. In 1911 it may have increased to that amount from 400 tons or 350 tons.

Q. Well, then, assuming that it was 350 or 400 tons in 1911, do you remember whether that was bought by contract or did you buy as occasion required?

A. We usually bought by contract.

Q. Now, for that year do you know from whom you bought, 1911?

A. I presume—well, we bought from both Lukens and Worth, probably mostly from Lukens.

Q. Had you been buying from them right along?

A. We bought from Lukens for the last thirty or forty years.

Q. And from Worth how long?

A. Ever since they have been making plates. I do not know whether they were first, but we used, before 1900—we used to use a great deal of heavy plates. Then we were in the steam boiler business, and we used a great deal, and we bought that from all plate manufacturers.

Q. That is before 1900?

A. Before 1900.

Q. I am only speaking of since that period, if you have bought in any quantities since 1900 from anybody except Lukens and Worth.

A. No.

Q. Then you had close relations with them? I mean by that not partnership relations, but I mean to say that your dealings with them have been of such long standing that you are on the basis somewhat of a regular customer with them, are you not?

A. Yes, very much.

Q. Back of the year 1912 did you buy from both of them?

A. We bought from both of them.

Q. Do you remember in what proportion, about?

A. Our principal purchases have been from Lukens.

Q. Do you recall at that time when you made those purchases for 1912, as to whom you got bids from and what the bids were?

A. No, I cannot recall prices at that time.

Q. Do you recall that during that year you got any from anybody else except Lukens and Worth, for heavy plate?

A. No, I think not.

Q. And probably that was so back to 1900 or 1901?

A. Yes, I think that was all true back to that time.

Q. Now, in the lighter plates and sheets—I believe that those terms are interchangeable?

A. Yes.

Q. In the year 1901 about what tonnage did you consume of that?

A. Sheets?

Q. Yes, light plates and sheets.

A. In 1901 our tonnage probably ran 600 or 700 tons.

Q. Did that increase along?

A. It has increased constantly since then, yes.

Q. Somewhat in a gradual way?

A. Yes, it has been a consistent growth.

Q. From year to year?

A. Yes.

Q. Now, do you know from whom you bought between the period of 1901 to 1905, light plates and sheets?

A. Our purchases were pretty well confined at that time to the Alan Wood Company and J. Wood & Brothers Company.

Q. They were eastern makers, were they?

A. Eastern makers.

Q. Can you name any others that you purchased from during that period?

A. I do not believe we purchased from any one else during that period.

Q. And your relations were pretty close with them, somewhat like your relations on heavier plates have been in recent years with Worth?

A. Something of the same nature, I should say.

Q. From 1901, say to 1905, can you recall and state as a matter of fact that on these light plates you got any bids from any others except them?

A. Oh, yes; I should say that I got bids.

Q. Can you recall what the bids were or anything about the prices?

A. Not without refreshing my memory by going over the papers, I could not.

Q. And you haven't done that?

A. No.

Q. And you cannot recall the variations?

A. No, I cannot make any definite statement as to the exact variations.

Q. Now, is it not a matter of fact that along from the period

of 1901 to 1905 the general prices quoted to you on those things were quite uniform for long periods of time?

A. No, I think not. I cannot recall any such condition. I have always gotten variable prices from the manufacturers.

Q. What do you mean by "variable prices"? Do you mean that the prices would vary at different periods?

A. The prices would vary at different periods, according to the situation they found themselves in as to tonnage on their books, just how badly they wanted our business, probably.

Q. You do not mean to say on every individual order that the prices of all the bidders were different?

A. No, I would not say.

Q. As a matter of fact, were they not frequently the same?

A. Possibly some of them would probably come in the same; that would be very likely.

Q. You are speaking of bids now, are you?

A. Yes.

Q. Now, from 1905 up to 1910 were the conditions different, and if so, in what respect, from what you have covered in your last answer?

A. I have never noticed any difference in conditions since I have been buying sheets; they were apparently all the same to me. We always go after prices, and we get what we can.

Q. And you were not yourself in any pool or combination, were you?

MR. REED: He has not finished his answer.

MR. DICKINSON: I thought he had. Had you finished?

THE WITNESS: We usually would get our price, and I usually take the proposition that is in all respects the most satisfactory one to us. We have two or three elements to consider, or factors; we do not always take the lowest price, by any means.

Q. You consider somewhat the element of the people you have been trading with, that you know?

A. People we have been trading with and that we know, and deliveries and service and quality.

Q. You were not yourself a manufacturer of plate, were you?

A. No, sir.

Q. And you were not in any manufacturers' pool?

A. No.

Q. And you know nothing yourself of that?

A. No.

Q. Do you know who were in the pools? I mean of your own knowledge.

A. What pools?

Q. Any plate pool or structural pool?

A. No, I haven't any definite knowledge of anything of that kind; I have heard rumors.

Q. I am not asking about rumors; I am asking what you know.

A. I do not know, no. I have no information about it.

Q. Now, coming back to sheets and plates, from whom did you buy, or have you bought, for the year 1913?

A. In 1913 we bought of Alan Wood; the American Sheet & Tin Plate Company; J. Wood & Brothers. I think that is all. And the Sharon Steel Hoop Company, we bought from them in 1912—you are asking now?

Q. No, 1913.

A. In 1913, that applies as well. The Sharon Steel Hoop, and possibly the Youngstown Sheet & Tube, although I will not be positive as to that, in 1913.

Q. You say you bought from the American Steel & Wire Company?

A. We bought wire from the American Steel & Wire Company.

Q. And sheets from the American Sheet & Tin Plate Company in 1913?

A. Yes.

Q. When did you make that purchase?

A. In 1913.

Q. I know, but in what part of the year? That is the present year.

A. We might at several periods during the year.

Q. What periods?

A. We had one contract that we made in 1912 on which deliveries extended pretty well into 1913, and we made a purchase in the spring of 1913 on which deliveries extended pretty well into the summer.

Q. Well, now, what tonnage did you buy in the last contract that you referred to?

A. I think the last contract was for 2,000 tons, if I am not mistaken; either 1,500 or 2,000 tons; I do not know which.

Q. Now, that was a light sheet steel?

A. No, it is not light sheet; it is blue annealed sheet.

Q. That was one contract, was it?

A. That was one, that was the 2,000-ton contract.

Q. That was made this year. Did you make any other contract this year with the American Sheet & Tin Plate Company?

A. Yes; I think we made another.

Q. What was the tonnage of that?

A. I do not know that any deliveries have been made on it.

Q. What did it call for?

A. It called for the same character of material.

Q. No, the quantity.

A. I think that was 1,500 tons.

Q. To be delivered within what time?

A. That was to be delivered presumably within this year; that is, providing they are able to make the deliveries.

Q. What is the total tonnage you bought this year from the American Sheet & Tin Plate Company?

A. Bought, or which they delivered?

Q. I am not referring to the contract which came over—I will come to that later.

A. I do not quite understand your question. Do you want to know what they have delivered or what we have purchased?

Q. What you have purchased; what you have contracted for, that was covered by your contracts this year?

A. I won't be positive whether we had two 2,000-ton and a 1,500-ton contract, or one 2,000-ton and a 1,500-ton contract; I am not sure.

Q. So it was either 3,500 or 4,500 tons?

A. No, it was either 3,500 or 5,500 tons.

Q. And what are your total requirements this year?

A. Well, probably eight or nine thousand tons. I am not sure there. I cannot tell.

Q. Last year what did you buy from them?

A. You see, what we bought and what was delivered make it confusing. They delivered about 3,400 tons, I think.

Q. Last year?

A. Last year, yes.

Q. Well, but you had a contract of which a part of the delivery has been this year?

A. Yes, sir.

Q. Well, what I want to get at now is what did the contracts made last year call for in tonnage with that company?

MR. LINDABURY: Without regard to the date of delivery?

MR. DICKINSON: Yes.

THE WITNESS: I am not positive; probably 4,000 tons. I won't be sure about it.

By MR. DICKINSON:

Q. That was about 50 per cent. of your requirements, was it?

A. Pretty nearly, yes.

Q. Now, in making those contracts did you look at these quoted prices that you referred to in the Iron Age, in order to get a line on it?

A. Yes; we have to have some idea, some general information on the market as to what things are being sold at.

Q. Now, these particular contracts that I have referred to, did you buy below those quotations?

A. We bought below those quotations.

MR. DICKINSON: That is all.

MR. REED: That is all.

(Whereupon a recess was taken until 2 o'clock p. m.)

AFTER RECESS.

PAUL STARRETT

was called as a witness on behalf of the defendants, and being first duly sworn, testified as follows:

DIRECT EXAMINATION

By Mr. Lindabury:

Q. Mr. Starrett, where do you live?

A. East Orange, New Jersey.

Q. What is your age?

A. Forty-six.

Q. And your occupation?

A. Builder.

Q. Are you connected with any building corporation?

A. I am president of the George A. Fuller Company.

Q. How long have you been president of that company?

A. About nine years.

Q. Were you connected with it before that?

A. Yes, sir.

Q. In what capacity?

A. I started in as a superintendent on one building in Baltimore.

Q. In what year?

A. 1898.

Q. And you advanced from that to some other position before you became president?

A. Yes, sir.

Q. What were your advances?

A. I came over to New York and was made general manager of construction of the whole company.

Q. When was that?

A. That was in 1901, I think. Then I was made vice-president, and acted in that capacity until I was made president.

Q. And that, I take it, must have been about 1904?

A. About that.

Q. In Baltimore what did you do?

A. I built four or five buildings in Baltimore.

Q. I did not mean to ask the number, but did you superintend the work of your company during that period in Baltimore?

A. Yes, sir.

Q. And any other territory?

A. Yes; I started the business in Washington, and ran that from Baltimore.

Q. You spoke of your business as being that of a builder. I suppose you meant that is the business of the George A. Fuller Company?

A. Yes, sir.

Q. How long has that company been in business?

A. About thirty-five years, I think.

Q. And its headquarters, I take it, are in New York?

A. In New York.

Q. Has its business been large or small?

A. It has been very large.

Q. It is one of the largest builders in the United States, is it not?

A. Yes, sir.

Q. How many buildings has it now under construction?

A. I think we have fifty-nine building contracts in operation now.

Q. Can you tell me the number of buildings that they have put up in ten years? Or perhaps you can tell me the cost of the buildings they have put up in a given year; anything to indicate the extent of the business.

A. Taking the last ten years, it has averaged from about $18,000,000 to $35,000,000 a year.

Q. What is the later average; the last year or two?

A. About $23,000,000 or $24,000,000.

Q. How much was it ten years ago, or twelve years ago; 1901 or 1902?

A. I should say it was down around ten or twelve million.

Q. How much is it at the present time, did you say? Thirty-five or thirty million?

A. No; it is now something between $22,000,000 and $26,000,000. I cannot tell. We are cleaning it up all along.

Q. Averaging about half way between those figures?

A. Yes.

Q. And has the increase in the intervening time been fairly regular?

A. Yes, it has been fairly regular. Of course two or three years ago we had our largest business. We had up to $35,000,000. It is falling off with the let-up in the times.

Q. Now, which was the year in which you had the thirty-five millions?

A. I think that was in 1910.

Q. I presume 1908 was a lighter year?

A. Yes; but not much.

Q. Is your business confined to the territory you have mentioned, the Metropolitan district, Washington and Baltimore, or is it more extensive?

A. It is spread pretty much all over the United States and somewhat in Canada.

Q. What large buildings have you put up in the last ten years in the United States or Canada?

A. Well, in New York, we have put up the Plaza Hotel and the Pennsylvania Railroad Station, and the big new government post office.

Q. Opposite the station?

A. Opposite the station. We are now building the Biltmore Hotel. We put up the big Consolidated Gas Building, the Trinity Building and the United States Realty Building. In Boston we put up the Copley Plaza and the Board of Trade, and we are now building the Harvard dormitories. In Philadelphia we put up the Bellevue-Stratford, and the Morris Building; we are now building the Ritz-Carlton. In Washington we recently received a contract for the new Lincoln Memorial Building. We built the Willard Hotel and the Union Trust Company. In Chicago we built the Monadnock, the La Salle Hotel, the Blackstone Hotel, and a number of other large buildings.

Q. That will do; you built others besides those you have named?

A. Yes; we are operating in twenty-six states on this continent to-day.

Q. And is the work in the whole 26 states all directed from headquarters here in New York?

A. Yes; not minutely, but generally.

Q. Generally?

A. Yes, sir.

Q. Do you confine yourselves to any particular kind of building?

A. Almost entirely to fireproof building construction.

Q. I suppose in all of those you use structural steel, do you not?

A. Yes.

Q. Are your purchases of structural steel per year considerable?

A. Yes.

Q. Could you give us an idea how much you use?

A. Well, approximately we use from 50,000 to 100,000 tons a year.

Q. That is, at the present time?

A. Yes.

Q. And when your business was proportionately smaller, as you have mentioned, was the amount of steel you used smaller in about the same proportion?

A. Yes.

Q. How do you purchase your steel?

A. We purchase by taking bids and awarding it to the contractor that in our judgment should get the work, after examining these bids.

Q. How long have you been doing that, getting your supply of steel in the way you last mentioned?

A. Well, we have been doing that for about seven or eight years; I do not remember the exact dates, but from about the time that the Steel Corporation was formed.

Q. That was in 1901, some twelve years ago.

A. Then it goes back farther than that.

Q. The period you have in mind is from the organization of the Steel Corporation?

A. Yes, from the time it got well under operation.

Q. How did you get your steel before that time?

A. Before that time we used to buy it all from the Carnegie Steel Company on a yearly contract, which we arranged at a certain time of the year.

Q. And what, in general terms, briefly, was the nature of that contract?

A. We had a contract for a tonnage not to exceed an amount which was agreed upon at a base price f. o. b. Pittsburgh, at a certain fixed base price; and then we had what they called card rates for fabrication, which were added to those prices, according to the character of the material which was made for us. For instance, a building which would have large sections and very little work on it would cost us much less than a skyscraper which was all full of wind bracing.

Q. Did this contract guarantee you against drop in prices?

A. Yes.

Q. How long did you get your supply of steel in that way? That is, how long had you been getting it in that way?

A. We had been getting it in that way for fifteen years, I fancy.

Q. You say that method of filling your requirements ended with the organization of the Steel Corporation, or at least since it has got well under way?

A. Yes.

Q. Why was that?

A. They refused to make that arrangement with us any more.

Q. Was it satisfactory to you?

A. Perfectly.

Q. And you got all your purchases under your contract from them?

A. Yes.

Q. That was a term of your contract, was it?

A. Yes.

Q. Now, what method, to give us as much detail as you are able to, have you pursued since the refusal of the Steel Corporation to continue the old Carnegie practice?

A. Since that we have established a purchasing department, or have an officer in the company in charge of purchasing steel, and he takes each contract as it is awarded to us and

gets propositions from all the steel companies which we think would be capable of filling the contract, and then we sit down and decide on the concern to whom we award the contract.

Q. And what do you take into consideration in reaching your conclusion?

A. The price first, and then the reliability and capacity of the concern making the bid.

Q. And have all your purchases since you began this latter practice, shortly after the Steel Corporation was formed, been made on a strictly competitive basis?

A. Always, except for some reason we had to do otherwise. For instance, in cases where we contract to build a large building on very indefinite data, or when we contract before the plans are completed and we have to protect ourselves and know where we can get the steel at a certain price, we have under these conditions gone to some concern and agreed with them on a price for that steel, provided we got the contract, and then when we got the contract turned it over to them without competition.

Q. Now, have these occurrences been exceptional or frequent?

A. They have been rather exceptional. Yes, I could say exceptional.

Q. From which, if any, of the subsidiaries of the Steel Corporation have you purchased your requirements in so far as you purchased them from any subsidiary?

A. The American Bridge Company is, I think, the only one.

Q. I think I neglected to ask you whether you fabricate your materials?

A. We do not.

Q. So that you buy everything fabricated?

A. Yes.

Q. What percentage, in the rough, of your requirements since you began to purchase from the Steel Corporation, have you obtained from the Bridge Company?

A. That varies slightly in different years. I should say that at the maximum we never had purchased more than 50

per cent., and at the present time I do not know of a single contract we have with the Bridge Company.

Q. And could you state a fair average?

A. I should say if I said 33 per cent. it would be high.

Q. Rather under than over?

A. Yes, sir.

Q. That is, through the whole period of twelve years?

A. I should think so.

Q. From what concerns are you in the habit of inviting bids when you have work of considerable magnitude? I will deal with the smaller later. When you have one of large magnitude, one of your larger contracts, from whom do you ordinarily invite bids or quotations?

Q. Well, we invite the American Bridge Company; Levering & Garrigues; Hay Foundry; Jones & Laughlin; Phoenix, if they will bid; Cambria; Lackawanna; George A. Just; Milliken Brothers. That is all I think of right in this district.

Q. Among which of them have you divided your large purchases?

A. American Bridge Company; Hay Foundry; Milliken; Levering & Garrigues.

Q. Have you given any to the Lackawanna?

A. Not directly to the Lackawanna. We have bought stuff where it was understood that the shapes were to come from the Lackawanna.

Q. And what about the Cambria?

A. The Cambria we have had very little luck with in getting low prices. I do not remember just now any contract we placed with them.

Q. I limited that question, you probably observed, to the larger contracts?

A. Yes.

Q. If you have pursued any different course or obtained quotations from any different class for your smaller contracts, please state that.

A. With the smaller contracts we keep pretty close track of all the little bridge shops, and we get quotations from anyone that we feel can carry out the work.

Q. And on those smaller jobs do you ask quotations also from the larger manufacturers?

A. Yes, sir.

Q. But extend your invitations to those who could not compete, I suppose, on large contracts?

A. Yes, sir.

Q. Is that the idea?

A. Yes, sir.

Q. I want to get it as you desire to put it. Now, have the quotations that you have received on these various specifications been uniform or variant?

A. They always vary.

Q. Has that been so during the whole period of twelve years?

A. Yes, sir; to the best of my recollection it has.

Q. Do you think of any time when all those concerns were quoting substantially the same prices?

A. No, I do not.

Q. Have the quotations varied from time to time?

A. Yes, sir.

Q. Not only varied, I mean, as between the persons or concerns quoting, but also at different periods?

A. Yes, sir.

Q. Did those variations in quotations as between the manufacturers appear to have anything to do with the state of work in their shops or their order book?

A. Yes, sir; that usually is what regulates that, I fancy.

Q. Just what, restate it as if it was not embodied in my question.

A. For instance, if a shop is chock full of work they won't give you as low a quotation as if they are apt to run out and have their organization lying idle. If you capture a shop with nothing to do you can make better terms than with a shop that is full.

Q. How do you know?

A. We have a man go and look it over.

Q. And your experience is the basis of that answer, is it?

A. Yes, sir.

Q. Do you ever invite bids from either the Bethlehem or the Pennsylvania or McClintic-Marshall; you did not mention them?

A. Yes, sir.

Q. You omitted them?

A. I have not undertaken to name them all, because I fancy there are ten or fifteen that I have not mentioned.

Q. And have you made purchases from these?

A. McClintic-Marshall we have. Who are the others?

Q. Bethlehem?

A. Yes.

Q. Pennsylvania?

A. No, never. We have taken their figures, but I do not think we have ever done anything with them.

Q. Were there ever times when two or three would quote substantially the same prices?

A. Substantially the same prices.

Q. They never were exactly the same?

A. Not to my recollection.

Q. Were they generally substantially different?

A. Yes; some of them would always be substantially different.

Q. And were the same always high comparatively, or always low, or was there a difference in that respect; a variation, I mean, in that respect?

A. A variation in that respect also.

Q. Some would be high at times?

A. Some would be high one time and low the next time.

Q. And how did you account for that?

A. The condition in the shops, or the way they guessed; they are all trying to get as much as they can.

Q. Has the competition for your trade been active?

A. Very active.

Q. During this whole period?

A. On the small work always. On the big work I do not think it is so active, although I think it is real competition.

And that also depends on the time and the state of the trade at the time.

Q. What do you mean by that?

A. I mean by that, when everything is running chock full and a big contract comes along that only one of the larger concerns could handle, the price is apt to be higher, and there is not so much variation in the price.

Q. The greater variation and the greater activity is when?

A. The greater variation in the price is when work is slack.

Q. They are looking for business much more keenly then, I suppose?

A. Yes, sir.

CROSS EXAMINATION

By Mr. Dickinson:

Q. You do not buy anything except fabricated material?

A. No, sir.

Mr. Dickinson: That is all.

Mr. Lindabury: That is all.

(Whereupon an adjournment was taken until to-morrow, Friday, October 31, 1913, at 10:30 o'clock a. m.)

ONE HUNDRED AND SEVENTH DAY.

EMPIRE BUILDING,
71 Broadway, New York City.

Friday, October 31, 1913.

Before Special Examiner JOHN ARTHUR BROWN.

Present on behalf of the United States, MR. COLTON.

Present on behalf of the defendants, MR. LINDABURY, MR. SEVERANCE, MR. BOLLING and MR. REED.

FRANK H. GORDON

was called as a witness on behalf of the defendants, and being first duly sworn, testified as follows:

DIRECT EXAMINATION

By MR. LINDABURY:

Q. Mr. Gordon, where do you live?

A. Coatesville, Pennsylvania.

Q. What is your age?

A. Thirty-five.

Q. What is your occupation?

A. General sales agent, Lukens Iron & Steel Company.

Q. And how long have you held that position?

A. About a year and a half.

Q. Did you have any connection before that with the sales department?

A. Assistant general sales agent.

Q. For how long a time?

A. In the sales department about eighteen years.

Q. Where are the works of the Lukens Company situated?

A. Coatesville, Pennsylvania.

Q. How long has that company been in business?

A. Incorporated in 1810.

Q. What is the business of that company?

A. Steel plates, sheared and universal rolled.

Q. Are those all the products that it makes?

A. Flanged boiler heads; in fact, any flanging work required in connection with boilers.

Q. But its leading production, I take it, then, is plates?

A. Yes, sir.

Q. What is its annual output?

A. About 240,000 tons.

Q. And how much of that consists of plates?

A. All plates.

Q. Where is its market?

A. All parts of the United States and Canada.

Q. Does it sell on the Pacific slope?

A. Yes, sir.

Q. Is your trade on the Pacific slope considerable?

A. Yes.

Q. How do you reach the Pacific Coast?

A. By rail and water from New York.

Q. By what route or routes?

A. From New York, you mean?

Q. Yes.

A. You can go by Panama, by the Luckenbach Steamship Company and the Panama Railroad, and on the other side the American-Hawaiian Steamship Company.

Q. Do all of them go by way of Panama or do some go around the Cape?

A. Some of them around the Cape.

Q. Do you know how the freight rate from your territory to the Pacific Coast compares with the rate from Pittsburgh or the Chicago rate?

A. By rail it is the same from Coatesville as it is from Pittsburgh.

Q. How about the steamship rates?

A. We sell f. o. b. cars Coatesville.

Q. Do you know whether the freight rates to the Pacific Coast are favorable to the eastern manufacturers, as against the Pittsburgh and further western manufacturers?

A. By water they are.

Q. Do you remember about how much a ton?

A. I don't know just offhand.

Q. How does the output of your company compare with its output ten years ago?

A. It has considerably increased.

Q. Can you tell us about how much?

A. That is pretty hard. The figures I gave you are what we have been making this last year.

Q. What did you say that is, about?

A. About 240,000 tons.

Q. Do you happen to know how much it was in 1910 or 1911?

A. I do not know, but I do know it was not near that much; less than 200,000 tons, I would say offhand, considerably less.

Q. We have an exhibit which puts it at 138,183 tons—(I refer to Defendants' Exhibit 96)—for the year 1911. Tell me whether or not that accords with your recollection.

MR. COLTON: I object on the ground that the question is leading, and that the witness is not shown to be qualified to answer of his own knowledge.

THE WITNESS: It does.

By MR. LINDABURY:

Q. And as to increases; could you approximate the output ten years ago?

A. I would say 140,000 to 150,000 tons.

Q. The same exhibit that I referred to in a former question puts the output——

MR. COLTON: I object before it is read, because it will put the information in the witness' mind. His testimony on the subject will be worthless if it is different from the exhibit. I cannot see any object in reading it from the exhibit. The exhibit may be correct, but you cannot get testimony out of this witness by reading from the exhibit, and it is improper on direct examination.

By MR. LINDABURY:

Q. The exhibit, Defendants' Exhibit 96, referred to in the former question, states the output for the year 1901 at 97,232 tons, which you observe is about 40,000 tons less than 1911.

What have you to say as to the approximate accuracy of that exhibit in that respect?

A. What did you say, 97,000?

Q. 97,232.

A. I cannot answer that definitely; it depends upon market conditions.

Q. Very well; you do know that there has been a steady and very considerable growth in that business?

A. Yes; I do.

Q. Are or are not the products of your company sold in competition with other manufacturers of similar products?

A. They are.

Q. Who are the manufacturers in this country of the products of the kind that your company turns out?

A. Worth Brothers Company, Central Iron & Steel Company; United States Steel Corporation, La Belle, Otis Steel Company, Portsmouth Steel Company; they do not manufacture all that we do, but certain lines that we do.

Q. They manufacture some lines that you manufacture?

A. Yes.

Q. Does the Cambria manufacture plates?

A. Yes.

Q. And the Lackawanna?

A. Yes.

Q. Jones & Laughlin?

A. Yes.

Q. Inland Steel?

A. Yes.

Q. The Pennsylvania?

A. I don't think the Pennsylvania Steel manufactures plate.

Q. The Maryland Steel Company?

A. No, sir.

Q. Well, do you meet these various concerns in competition in some one or more of the territories in which you sell?

A. We do.

Q. Are the prices that you obtain for your products uniform from time to time, or do they vary from time to time?

THE WITNESS: They vary from time to time.

Q. Are the prices which you obtain uniform with those which your competitors obtain, so far as you know their prices, or do they vary from the prices that your competitors obtain?

A. They vary.

Q. Do these answers that you have just given apply to the whole period of ten years last past?

A. They do.

Q. Has there been any time during that period when the prices that you obtained for your product were level for any considerable length of time?

A. No, I think not.

Q. Has there been any time during that period of ten years when you and your competitors were all getting the same prices for the same products?

A. There may have been specific times when we were up against competition, when we took business, but they usually varied.

Q. They usually varied?

A. Yes.

Q. And how happened it that at times you got the same prices that they were asking or getting?

A. When our salesmen would report that we could have an order at another man's figure.

Q. Then what would you do?

A. If we wanted it we met the competition and took it.

Q. That is the way that you happened to get the same prices as your competitors?

A. Yes.

Q. Were those occurrences more or less frequent during the period you have mentioned?

A. Yes; depending, of course, upon business conditions.

Q. What are the business conditions that you allude to that affected the course of trade in that respect?

A. A full order book or a shy order book.

Q. What difference does that make in the prices you get?

A. With a full order book we quote higher prices and take our chances of either getting or losing the business. With a

shy order book, we instruct our salesmen to go and get the other fellow's figure and meet it if possible.

Q. Has that been the course during all of the ten years inquired about?

A. Yes.

Q. And is your practice in that respect, so far as you have been able to observe, also the practice of your competitors?

A. I believe so, yes.

Q. Does the shy order book or the full order book seem to make the same difference in their practice that it does in yours?

A. I think it does, yes.

Q. Are the prices that you quote for the sale of your various products fixed by or in pursuance of agreements between your competitors or any of them?

A. No, sir.

Q. Does that answer hold true as to the whole period of ten years last past?

MR. COLTON: I object to that as leading and suggestive. You ought to ask the witness what is the case for the last ten years in regard to prices, instead of following it up with a suggestion as to holding true.

MR. LINDABURY: I accept your objection, but reject your advice.

THE WITNESS: Yes.

By MR. LINDABURY:

Q. Does it also hold true as to each and every article which you have produced and sold in competition with the concerns you have named, or any of them?

A. Yes.

Q. In what department of your company's business are the prices of your products fixed?

A. In my department.

Q. By yourself or in consultation with other officers of your company?

A. By consultation with our president.

Q. Has that been true during the last ten years?

A. It has.

Q. Have you participated in those consultations from time to time?

A. Yes, sir.

Q. Is the president called in, or does he take any part in consultations in respect to the price of all products, or only the larger ones, or larger sales?

A. The larger sales.

Q. In those consultations, when prices are fixed for your products, what considerations obtain?

A. The cost to ourselves in producing the article.

Q. Have the prices thus fixed in those consultations at any time during the last ten years been fixed at a price that was agreed upon or had been agreed upon with competitors?

MR. COLTON: Just a moment. I object, the witness not being shown to know, and it being merely a conclusion upon a state of facts not shown.

THE WITNESS: No, sir.

By MR. LINDABURY:

Q. Has any price during the ten year period I mentioned been fixed, for any of your products, at any of the conferences you refer to, at a figure stated by your president or anybody else to have been agreed upon by him with competitors or anybody else?

A. No, sir.

Q. Have any other elements been taken into account in any of these conferences in the fixing of your own prices, other than cost and market conditions and the state of your order book, or the general conditions of trade?

MR. COLTON: Objected to on the ground that the witness is not shown to know or to have knowledge on the subject.

THE WITNESS: No, sir.

By MR. LINDABURY:

Q. Has the competition during the last ten years in the steel products that you have sold been active?

A. It has.

MR. COLTON: Just a moment. I would like to enter an ob-

jection on the ground that the question calls for a conclusion of the witness upon a state of facts not shown.

By Mr. Lindabury:

Q. I suppose you know, as a matter of fact, what activity is, do you not?

A. I do.

Q. And especially in the sale of your products that are under your charge?

A. Yes, sir.

Q. Has there been greater activity at some periods than at others?

A. There has.

Q. What are the more active, and what the less active, periods?

A. When an order book is full we do not care so much, and we do not watch the price so closely, and we usually get a higher price; and of course when the order book is shy, we have to get down to our costs and go after the business.

Q. And figure how close you can sell?

A. Yes.

Q. There are market quotations, I think, in some of the trade papers, are there not, of some of your products or all of them?

A. Yes.

Q. Do you observe them or keep track of them?

A. Yes.

Q. Do the prices that you get conform to those quotations ordinarily?

A. Not always.

Q. Do the prices that your competitors get, so far as you are able to ascertain them, conform to the trade paper quotations?

Mr. Colton: Objected to on the ground that the answer is immaterial, the witness not having been shown to have any knowledge as to what his competitors obtain from time to time.

The Witness: They do not.

By Mr. Lindabury:

Q. Do you keep fairly well informed as to the prices that the subsidiaries of the Steel Corporation obtain?

A. I endeavor to, yes.

Q. Do you know whether they hold to the quoted price in the Iron Age or other publications?

A. They do not.

Q. Do you conform to their prices so far as you are able to learn of them, or do you sell at different prices?

A. We sell at different prices.

Q. Are there times when you uniformly get more, and times when you uniformly get less?

A. There are.

Q. What times are they?

A. When business is good, the Corporation is usually filled up and we are in a position to make quicker deliveries and therefore get a higher price.

Q. Does that hold fairly true of all periods of flush times?

A. It does.

Q. And are there times when you get a lesser price than the Steel Corporation gets, so far as you are able to learn their price?

A. Yes.

Q. What times are those?

A. When we need work.

Q. And when is it you need work? I suppose you need work all the time, more or less?

A. Well, when we are right up against it at the mills; when we cannot see a week or two ahead, then we need work.

Q. That is, in dull times?

A. Dull times.

Q. Is what you have said of your own business true of the business of any other of the independents?

A. I should imagine it was, from what I know.

Q. So far as you are able to ascertain?

A. So far as I know.

Q. I take it that you try to get as much information as you are able to get of what your competitors are doing and the prices they are getting?

A. Yes, sir.

Q. And is it or not true that prices of the independents generally differ considerably from the prices of the Steel Corporation's subsidiaries, in dull times?

MR. COLTON: Objected to as obviously based on hearsay not shown, and will be based on anonymous hearsay at that.

MR. LINDABURY: You may answer, notwithstanding the obviously anonymous character of my question. Go on and give us the anonymous hearsay you have gathered in the course of your business.

(By request the stenographer repeated the pending question.)

THE WITNESS: Yes, sir.

By MR. LINDABURY:

Q. And how would you answer the same question with regard to flush times?

A. They differ from the prices of the Corporation.

Q. Above or below them?

A. Usually above, in flush times.

Q. Do the price quotations, therefore, contained in the Iron Age and similar trade publications, indicate with any kind of exactness the actual prices obtained for steel products?

MR. COLTON: Objected to on the ground that the question is argumentative and leading. I also object to the witness as not shown to be qualified to give any answer on it; and further on the ground that the question calls for a conclusion on a state of facts not shown, that may exist in the witness' mind, but that are not disclosed to the court.

(By request the stenographer repeated the pending question.)

MR. LINDABURY: I will strike out the word "therefore." That is the only part of the question that might be considered as argumentative.

THE WITNESS: No; they do not.

MR. LINDABURY: The witness is yours, Mr. Colton.

CROSS EXAMINATION

By Mr. Colton:

Q. Do you know as to whether the prices obtained in 1909, about from April on—say February on, were higher or lower than the prices ordinarily obtained during 1908?

A. I do not know offhand. If that was a flush time I would say they were higher.

Q. That is not the question. Do you know anything about prices during the year 1909?

A. I do.

Q. What do you know about prices during 1909?

A. I knew all prices that were made during 1909.

Q. Was there any fall in prices during 1909?

A. I cannot answer without looking up the records.

Q. Don't you know enough about the prices in general to know there was a marked decline in prices in 1909?

A. I do not know, no, sir; not without looking up the records.

Q. What do you recollect about the movement of prices from the fall of 1907 to the spring of 1909, if anything?

A. I do not recollect anything about that. I keep a record of all those things, and could very quickly tell you at home.

Q. Do you recollect anything about the variation of prices during the period from November, 1907, to October, 1909?

A. No, I do not.

Q. Do you recollect anything about the variation in prices from October, 1909, to the spring of 1911, at which time it was generally announced that the Republic Steel Company had cut prices?

A. No, I do not recollect anything about it.

Q. Do you recollect anything about the movement of prices following the announcement that the Republic Iron & Steel Company had withdrawn from the co-operative movement?

A. No, I do not.

Q. Do you recollect anything about the movement of prices prior to October 26, 1911?

A. No, sir.

Q. Your mind is a complete blank on that, is it?

A. So far as my recollection is concerned; I do not depend on my mind; I keep records at home of that.

Q. Now, as a matter of fact, don't you know that the output in 1908 was a smaller proportion of the capacity which the mills could turn out than it was in the year 1909?

A. No, I do not know without looking up the records. I do not burden my mind with that.

Q. Now, if it is a fact that the output in 1908 was a smaller proportion of the capacity than the output in 1909, and that prices in 1908 were higher than they were in 1909, is it a fact that prices are always governed by the condition of the mills in respect to business?

MR. REED: I object to that for the reason that there is no evidence to justify either assumption that is made in that question.

MR. COLTON: You may answer on the supposition that both assumptions are correct and are amply supported by the evidence.

THE WITNESS: I do not know that they were higher then without looking up my records.

By MR. COLTON:

Q. I do not think that answers my question. Repeat the question.

(The stenographer repeated the question as follows:)

"Q. Now, if it is a fact that the output in 1908 was a smaller proportion of the capacity than the output in 1909, and that prices in 1908 were higher than they were in 1909, is it a fact that prices are always governed by the condition of the mills in respect to business?"

THE WITNESS: The cost of raw materials might be higher then, and that would affect the cost of production, if that is a fact; I do not know that is is.

By MR. COLTON:

Q. There are many other conditions that enter into the price other those that you have named; it is not merely the condition of the mills?

A. The condition of the mills and cost of raw material.

Q. Did you know at any time the capacity of the Carnegie Company during the year 1909?

A. I did not.

Q. Did you know the capacity of Jones & Laughlin during 1909 at any time?

A. I did not.

Q. Now, just name the different competitors whose capacity you knew in the year 1909?

A. You mean actual capacity as compared with our own, whether they could make more or less than our own?

Q. I mean approximately their actual capacity.

A. I do not know any of them, their approximate capacity.

Q. Did you know in 1909 the proportion of the capacity that the United States Steel Corporation was operating?

A. I did not.

Q. Did you know that as to any of your competitors?

A. In 1909?

Q. Yes.

A. I might have known it at that time.

Q. As to which of your competitors then did you know it?

A. By paper reports, that is all I would know about it then.

Q. Your information would be based on trade reports as to outputs?

A. Yes, sir.

MR. COLTON: I object to the witness' testimony in respect to how mills other than his own behaved with respect to going after business, as based on hearsay and trade reports, the trade reports not being produced.

By MR. COLTON:

Q. Would your answer be the same for other years than 1909 in respect to your competitors?

A. Yes, sir.

Q. Now, you fixed the price on the larger orders after consultation with your president. Who is that?

A. Mr. A. F. Huston.

Q. Mr. Huston was a member of the plate pool, so-called, the formal plate pool, from November, 1900, down to some

time in 1904 or 1905? Did you attend any of those meetings of the plate pool?

A. I did not.

Q. You do not know of your own knowledge as to how many meetings Mr. Huston attended during that period, do you?

A. I do not.

Q. Now, the meetings that followed the more formal plate pool, do you know how many of those meetings he attended?

A. I do not.

Q. Now, the meetings that began with the so-called Gary dinners: Do you know as to how many of those meetings he attended?

A. I do not know, sir.

Q. Do you know even as to the fact that he was a member of the plate committee appointed by Judge Gary, and the other members of the general committee?

A. That he was a member of the plate committee?

Q. Yes.

A. I do not know; no, sir.

Q. Now, from what source did you learn the price of the Steel Corporation in plates?

A. From our salesmen.

Q. Is that the only source that you ever used in learning the prices of the Steel Corporation?

A. In learning it?

Q. Yes; in learning the price of the Steel Corporation.

A. And what the Iron Age says.

Q. Does the Iron Age quote the prices of the Steel Corporation?

A. I could not say as to that. It is supposed to, but I can not say as to that.

Q. It is your information that the Iron Age quotes the prices of the Steel Corporation?

A. Of the Pittsburgh mills.

Q. Including the Carnegie Company?

A. Including the Carnegie Company, and Jones & Laughlin, in Pittsburgh.

Q. Is that generally understood, that the Iron Age is quoting the prices of the other mills located in Pittsburgh, the Pittsburgh price in the trade?

A. Yes, I think it is.

Q. You only personally, even indirectly, through your agents, hear of a small proportion of the sales of the United States Steel Corporation?

MR. REED: What does that mean?

MR. COLTON: I will let the witness judge. Read the question.

(The question was repeated by the stenographer.)

MR. REED: I object to that question as meaningless.

(At the request of the witness, the question was again repeated.)

THE WITNESS: I do not know what proportion we hear of.

By MR. COLTON:

Q. You haven't any idea how many sales they make of plates a year, have you?

A. No, sir.

Q. What means do you have of getting the prices of your competitors other than the United States Steel Corporation?

A. From the salesmen.

Q. Do you get the prices of your competitors as well as the Steel Corporation from the Iron Age, as testified in respect to the Steel Corporation?

A. The Pittsburgh mill prices, yes, and any reports from New York and Philadelphia are supposed to be the prices of the mills in those territories.

Q. How many specific reports did you have of the price of the Steel Corporation in respect to plates during 1909, approximately?

A. How many specific reports?

Q. Yes.

A. I don't know.

Q. Can you not give any idea?

A. No.

Q. You cannot give that for any year?

A. No, sir.

Q. In the year 1909 did you have as many as 25 reports in respect to specific sales made by the Steel Corporation?

A. I think so, yes.

Q. During 1909, on what did you base your thought as to the 25?

A. Just what you hear at the present time I know it would be more than that.

Q. You are basing it on what you hear at the present time, rather than any recollection in 1909?

A. Yes.

Q. And you haven't any recollection of how many reports you heard in 1909?

A. Except that 25 would be a very small number.

Q. Have you any recollection as to the tonnage involved in the sales?

A. No, sir.

Q. You testified that you sell plates all over the country, did you not?

A. Yes.

Q. Do you sell both sheared plates and universal plates all over the United States?

A. Yes.

Q. Now, what do you know as to the extent of the variation of prices during 1909 from the quoted prices in the Iron Age, if anything?

A. I do not recall at all.

Q. Did you know at that time as to the extent of the operations?

A. Yes.

Q. Did you during the year 1909 take the Iron Age and take its quotation of prices and compare it with what you were getting?

A. We used it as a guide, and took what our salesmen reported.

Q. You used it as a guide? What do you mean by using that price as a guide?

A. If we had no reports from the salesmen, the Iron Age report would not be considered to be true; the salesmen's reports would or would not confirm the Iron Age.

Q. Next to your sales reports, you consider the Iron Age your best source of information?

A. Any of the trade papers, the Iron Age, the Iron Trade Review; any of them.

Q. Are you in a position to contradict the testimony given in this case by Mr. Farrell, that the prices of the Corporation are published and uniform?

MR. REED: That is objected to as improper cross examination.

(The question was repeated by the stenographer.)

MR. REED: Objected to further unless all the testimony of Mr. Farrell on that subject is read to the witness.

By MR. COLTON:

Q. (Continuing). As a general rule?

MR. REED: I renew the objection to the question as changed.

THE WITNESS: I wish I understood your question.

By MR. COLTON:

Q. Do you mean to say that you can testify that as a general rule it is not a fact that the prices of the Steel Corporation are published and uniform?

A. I do not know as I can answer that question.

Q. Well, you haven't sufficient information to answer that question, have you?

A. No, I don't think I have.

Q. As a general rule they may be substantially in accord with their published prices, may they, or not, the prices of the Steel Corporation?

MR. REED: You mean is it possible that they should be?

MR. COLTON: I mean so far as he knows.

THE WITNESS: That the published prices of the Steel Corporation, they strictly adhere to?

By MR. COLTON:

Q. That they adhere to, as a general rule; substantially. You haven't sufficient information to answer that question in regard to that?

A. No, I haven't sufficient information to answer that.

Q. Have you sufficient information to answer that question in respect of any of the Pittsburgh mills that quote prices in the Iron Age?

A. No; I have not.

Q. Which of your competitors are you best informed as to the prices of?

A. Do I have to answer that, Mr. Reed?

MR. COLTON: Mr. Reed is not any judge of whether you should answer or not.

MR. REED: Neither is Mr. Colton.

MR. COLTON: Neither of us are. You may decline to answer, of course.

MR. BOLLING: If the witness wants to ask his counsel for advice as to his rights, I think it is perfectly proper for him to do so; and I believe the Master will so hold.

MR. COLTON: Mr. Reed may rule on it if he likes.

MR. REED: Have you any objection, Mr. Gordon, to stating your reasons for your disinclination to answer that question?

THE WITNESS: I do not know that I can answer it.

(At the request of the witness the pending question was repeated by the stenographer as follows:)

"Q. Which of your competitors are you best informed as to the prices of?"

THE WITNESS: All we go by is our salesmen's reports. I suppose we hear more reports, possibly, of the Steel Corporation than of the others. We hear as to others of the competitors too, but we hear more of the Steel Corporation's prices.

MR. REED: I think that answers the question.

By MR. COLTON:

Q. Then you keep yourself most informed as to the prices of the Corporation? Is that correct?

A. That is one of the leading ones.

Q. It is the leading one, is it not?

A. Yes; the leading one in certain products. I will say that.

Q. It is the leading one in plates, is it not?

A. In tank plates it is; not in boiler plates and marine plates.

Q. Does it make boiler plates and marine plates?

A. They can, but I do not think they do.

Q. As a matter of fact, then, it is the leading one in the products that it makes? Is that it?

A. Yes; I can say that,—in the products which it cares to make.

Q. I have not a transcript of your testimony as yet, and if you would answer this question I would like to have you do so and it may save some cross examination:

Did you testify as to the competition of the Corporation in respect of any other product than plates?

A. Universal plates?

Q. Yes; I am including universal plates and sheared plates together.

A. They are our only product. We manufacture boiler heads, and the Corporation does not do that.

Q. So plates is the only thing in which you come in contact with the Corporation?

A. Yes.

Q. You stated that you thought that a tonnage of 138,000. read to you by Mr. Lindabury, was correct. Did you have any independent recollection of that tonnage until Mr. Lindabury read you the figure of 138,000?

A. Only in my own mind, that we were increasing in business, increasing our output.

Q. During the year 1910 do you not know that your output in that year was greater than it was in the year 1911, in plates?

A. I do not know, without looking up the record; no, sir, I do not.

Q. And you do not know whether it was greater in 1909 than it was in 1910, do you?

A. No; I was taking into consideration the increase in our business. I do not know just comparing one year with another year.

Q. Do you not know that the year 1910, comparatively speaking, was a year of large output as compared with 1911?

A. I do not remember that without the records, no, sir.

Q. You do not know whether the growth has been uniform or not, do you?

A. Taking it over periods, one year may have been up and one year may have been down. Taking it over a period of ten years it has been uniform.

Q. What do you mean by that?

A. That we were producing considerably more this year than we did ten years ago. There have been ups and downs in the different years.

Q. Is that what you mean by saying it has been uniform as to the increase?

A. Yes.

Q. You do not mean to say that, as a matter of fact, your output in 1901 was not greater than it was in 1904?

A. I do not know.

Q. And that your output in 1907 was not greater than it was in the year 1911?

A. I do not know as to those specific cases at all.

Q. I have forgotten whether I asked you whether Mr. Huston served on the Gary Plate Committee.

A. You asked me and I said I did not know.

Q. You never knew as to the extent to which Jones & Laughlin varied from the Iron Age in 1909, as to its prices, did you?

A. No; I do not think I did know.

Q. Do Jones & Laughlin make plates?

A. Yes; Jones & Laughlin make plates.

MR. COLTON: That is all.

REDIRECT EXAMINATION.

By MR. REED:

Q. Who is the leading maker of boiler plates in this country?

MR. COLTON: Objected to as immaterial.

THE WITNESS: We claim to be.

By Mr. Reed:

Q. When you said that you had no recollection of prices in 1908 and 1909, did you mean as to particular prices quoted at any particular time, or did you mean that you had no recollection whatever of the business affairs of your company in that year?

A. Particular prices at that time. I keep a record of all prices, and I refer to that, rather than rely upon memory.

Q. Mr. Gordon, if during any period your company had followed the policy of adhering to a uniform price with other manufacturers, refusing to cut under such a price in order to get business, do you think you would remember that incident now?

A. Oh, yes.

Q. If such a thing had happened ten years ago do you think you would remember it?

A. Oh, yes.

Mr. Reed: That is all.

Mr. Colton: That is all.

JAY G. WEISS

was called as a witness on behalf of the defendants, and being first duly sworn, testified as follows:

DIRECT EXAMINATION

By Mr. Reed:

Q. Where do you live?

A. Montclair.

Q. What is your occupation?

A. Works manager of the Hyatt Roller Bearing Company, Newark.

Q. Where is that company located?

A. Its works are at Harrison, New Jersey.

Q. How long have you been works manager of the Hyatt Roller Bearing Company?

A. About four years.

Q. Did you have any connection with that company before that time?

A. Yes, sir.

Q. What was it?

A. General superintendent and assistant works manager.

Q. How long have you been with the company?

A. About seven years.

Q. How long have they been in business?

A. I can not answer that. Twenty years, I guess.

Q. What are its products?

A. Roller bearings. The Hyatt Roller Bearing is a flexible roller, different from a solid roller.

Q. To what particular use are those bearings applied?

A. In all kinds of machinery, automobiles, traction engines; in fact any kind of machinery where a bearing is used.

Q. What kind of steel products does that company buy?

A. We use cold drawn shapes of all kinds, cold rolled.

Q. Any other steel products?

A. Principally that. We use tubing.

Q. From what companies does the Hyatt Company buy its steel?

A. The New Process Steel Corporation of Lancaster, Pennsylvania; Carpenter Steel Company of Reading; Crucible Steel Company; Pardee Works, Perth Amboy; Morris & Bailey; Superior Steel Company; Griffin Manufacturing Company; Jones & Laughlin; American Steel & Wire Company.

Q. Do you get any from Heller Brothers?

A. Heller Brothers.

Q. During the past seven years, Mr. Weiss, while you were connected with that company, were you familiar with the purchases of steel materials that it has made?

A. Yes, sir.

Q. Will you state whether or not those purchases have been made on a competitive basis?

A. Yes, sir.

Q. Will you state whether or not there has been competition among these manufacturers that you have named to get your trade?

MR. COLTON: I would like to enter an objection to that as calling for a conclusion upon a state of facts in the witness' mind not disclosed to the court.

THE WITNESS: Yes, sir.

By MR. REED:

Q. What percentage of the purchases of your company during that period have been made from the competitors of the United States Steel Corporation?

MR. COLTON: Objected to on the ground the witness is not shown to have knowledge of the 180 odd corporations belonging to the United States Steel Corporation.

MR. REED: He has named the American Steel & Wire Company. I withdraw the question for the moment.

By MR. REED:

Q. Do you know that the American Steel & Wire Company is connected with the Steel Corporation?

A. I do.

Q. What percentage of your purchases of this material have been made from companies other than the American Steel & Wire Company?

A. Less than one-third from the Corporation.

Q. That is, that the competitors have sold more than two-thirds of your purchases?

A. Exactly.

Q. I asked you the question the other way, and I did not want to get it inverted. I suppose you buy where you get the best quality, the best service and the best price, do you?

A. Exactly.

CROSS EXAMINATION

By MR. COLTON:

Q. Does the American Steel & Wire Company furnish both cold drawn and cold rolled shapes?

A. It does.

Q. What style of steel are these shapes? What is the use of them?

A. We use rectangular shaped wire for our rollers. The cold rolled strips are used as a casing for our bearings; it goes into machinery, into automobiles, cars—any other machinery in which our bearings are applied.

Q. What is the average price per ton, approximately, of cold drawn shapes?

A. It varies according to our use.

Q. Have you any base price?

A. Our business is peculiar to itself. I do not think that there is any base price for that kind of material.

Q. Then the material, so far as you know, is peculiar to your business?

A. Yes, sir.

HARRY D. WESTFAL

was called as a witness on behalf of the defendants, and being first duly sworn, testified as follows:

DIRECT EXAMINATION.

By Mr. Lindabury:

Q. Where do you live?

A. Steubenville, Ohio.

Q. What is your age?

A. Forty.

Q. What is your business?

A. Manufacturer of steel.

Q. With what concern?

A. La Belle Iron Works.

Q. Where are the works of that company located?

A. Our principal works are at Steubenville, Ohio. We have works in Wheeling, West Virginia, as well.

Q. How long have you been with the company?

A. Just about ten years.

Q. What is your position with that company?

A. I am vice president and general manager of sales.

Q. How long have you been general manager of sales?

A. Ten years.

Q. How long have you been vice president?

A. About a year.

Q. And as general manager of sales have you had charge of the sales of the company's products during that time?

A. Yes.

Q. Did that include the fixing of prices?

A. Yes; to a great extent.

Q. Not completely?

A. Oh, we usually consult on matters of that sort.

Q. You mean you had charge subject to consultations with your superior officer?

A. Always.

Q. And your superior officer was, I suppose, the president?

A. The president of the company.

Q. What are the products of the La Belle Company?

A. Well, we make open hearth steel and we make basic pig iron, and then we finish that in billets, sheet bars, plates, skelp, sheets of various kinds, pipe of various kinds, and cut nails.

Q. Well, your line of production is quite general, then?

A. I would regard it as such.

Q. How large is your production?

A. We make steel of our own, 400,000 tons a year about, of ingots.

Q. Do you buy anything?

A. Yes; we buy considerable quantities of Bessemer steel from time to time, which we convert.

Q. Convert into finished products?

A. Yes.

Q. Those you have named or some of them?

A. Yes.

Q. Do you make your ingots up into finished products?

A. Yes.

Q. Where is your market?

A. The general market; we sell all over the United States, some of our product goes to Canada and a little to Mexico at

times.

Q. Do you reach the Pacific coast also, of the United States?

A. Oh, yes.

Q. Who are your competitors?

A. All the leading steel companies, pretty nearly. Take the Lackawanna, Cambria, Republic, the Youngstown Sheet & Tube, the Wheeling Steel & Iron Company, and the various constituents of the Steel Corporation.

Q. How far is Steubenville west of Pittsburgh, and on which line of railroad?

A. On the Pennsylvania, about forty miles west.

Q. Are the prices which you obtain for your steel products fixed in agreement with your competitors?

MR. COLTON: That is objected to on the ground that this witness is not shown to be qualified to answer, and I object to the question as leading.

THE WITNESS: No, sir.

By MR. LINDABURY:

Q. Is that true of each and every year of the ten years that you have been general manager of sales?

A. Yes.

Q. Is it true of each and every article that you have produced and sold in the market?

A. Yes.

Q. Has there been any time during the ten years when the price of any article that you have produced and sold has been fixed by agreement with any competitor?

A. No, sir.

Q. How are you able to say that? What knowledge have you on the subject that enables you to give that answer?

A. Well, the chances are that if it had been done in our company I would have known it.

Q. Why?

A. Because that is my business.

Q. Have prices sometimes been fixed by you on particular sales in consultation with your president?

A. Yes; in a general way.

Q. And has any price ever been suggested by your presi-

dent or anybody else, in any of these conferences, as a price agreed upon with any competitor?

A. Not at all.

Q. What considerations controlled you in these conferences, or when you acted independently of them, in fixing prices?

A. Competitive conditions and cost——

MR. COLTON: I object to the witness stating what controlled him in those conferences, unless he is speaking peculiarly of himself and not of the persons with whom he conferred.

MR. LINDABURY: I thought you were about to add something when you were interrupted.

THE WITNESS: Competitive conditions and cost of manufacture.

By MR. LINDABURY:

Q. Does the state of your order book ever affect the question of prices?

A. Certainly.

Q. In what way?

A. Well, when our order book is lean we probably make lower prices. When we are full of orders the chances are we will advance our prices.

Q. By the words "probably" and "chances" do you or not mean to indicate that that is the usual course that your business takes?

A. That is always the case, I should say.

Q. Do you know whether what you have said in regard to your own business in those respects is true also of the practice of your competitors?

MR. COLTON: Objected to on the ground that the witness cannot know, except by hearsay, as to that, and also objected to on the ground that the witness has not been qualified.

THE WITNESS: I do not think I would be in shape to answer that question.

By MR. LINDABURY:

Q. Do you know whether or not when business is poor and

orders are few that your competitors show any greater activity in running after business than when times are flush and order books are full?

A. That is a perfectly natural result, yes.

Q. But have you observed anything on that subject in their practice?

A. Yes.

Q. Is it or not observable that competition is keener and competitors more active when times are dull and order books are lean, as you phrase it?

A. Yes; that is always so.

Q. Do prices ordinarily rule higher or lower when business is active and order books are full?

Mr. Colton: Objected to on the ground that the witness is not shown to have any knowledge as to the conditions of various mills of his competitors from time to time.

The Witness: They usually rule higher when business is active.

By Mr. Lindabury:

Q. How is it when the order books are lean and business is dull?

A. They rule lower.

Q. Have the prices obtained by you been uniform as to the various articles that you have sold over long periods of time, or have they fluctuated more or less from time to time?

A. They have fluctuated.

Q. And is that true of all the articles you produced and sold?

A. Yes, sir.

Q. Do some fluctuate more than others—some lines, I mean?

A. Yes, I presume they do.

Q. And have the prices that you have obtained from time to time for these various articles been the same as the prices obtained by your competitors for the same articles at the same time, or has there been variation there?

MR. COLTON: I object on the ground that the witness is not shown to be qualified to answer of his own knowledge.

THE WITNESS: I would say they have varied.

By MR. LINDABURY:

Q. Do you or not keep acquainted with market conditions as far as you are able?

MR. COLTON: I object on the ground that the answer would be based on hearsay.

THE WITNESS: I try to.

By MR. LINDABURY:

Q. Is that necessary to the performance of your functions as general manager of sales?

A. I think it is.

Q. You would hardly think you could succeed very long in discharging those duties unless you did, would you?

A. Not very.

Q. And in the course of your business do you try to ascertain, so far as you are able, prices that are obtained by your competitors?

A. I do.

Q. And do you succeed to a considerable extent in that quest for information?

A. I would answer yes, to our own satisfaction; that is the only way we can tell. We may not succeed.

Q. You may not always succeed? I suppose you do sometimes?

A. We try to.

Q. And do you also learn what prices your competitors are quoting? I mean, distinguishing now quoted prices from prices actually received.

MR. COLTON: I object to that on the ground that there is not necessarily any distinction.

THE WITNESS: We try to get that information whenever we can.

By MR. LINDABURY:

Q. And do you get it more or less?

A. Yes.

Q. I suppose that the price you quote is not always the price you actually receive, is it?

A. Not the first quotation, perhaps.

Q. I mean the first quotation, or perhaps the second, sometimes?

A. We have been known to shade our prices; to trade for business.

Q. And do your competitors appear to do the same?

A. I think they do.

Q. Do you sometimes meet your competitors' prices when you hear of them?

A. Yes, sir.

Q. And do they sometimes meet yours?

A. I presume so.

Q. Such appears to be the course of the trade, does it?

A. Yes; I think so.

Q. Has the trade or the competition in these various articles that you manufacture been active during this period that you have had charge of the sales?

A. Nearly always.

Q. Has competition been what you would term keen?

A. Yes, sir.

Q. Is there any one of these products that you manufacture, in the sale of which you meet less than three or four or more competitors?

A. I think not. I think everything we make is pretty generally competitive.

Q. And the competitors numerous?

A. Yes.

Q. Have they grown in number since you have had charge of sales?

A. Yes, sir.

Q. Have they grown in output?

A. Yes.

MR. COLTON: I object on the ground that the witness is not shown to have any knowledge on the subject.

By MR. LINDABURY:

Q. Has your company's output grown during this period?

A. Yes; we have increased our output.

Q. Considerably?

A. Yes.

Q. Has there been any time during the ten years when any article that you have produced and sold has not been sold on a strictly competitive basis?

Mr. Colton: Just a moment. I object on the ground that the question calls for a conclusion upon a complicated state of facts that may be in the witness' own mind, but is not disclosed to the court.

The Witness: Not at any time. It has always been competitive, as we regard competition.

By Mr. Lindabury:

Q. What do you mean by your statement "as we regard competition"?

A. Simply in the nature of the questions that you have been asking—that there is always competition on any article that we make. We hear of it; we sometimes meet it; sometimes we do not.

Q. Have the prices that you have quoted on these various articles been generally uniform with or variant from the prices quoted by your competitors at the same time for the same article, in so far as their prices have come to your knowledge?

A. As close to them as we could get it and get the business.

Q. Does that answer apply to cases where you knew what their quotations were?

A. We do not always know what their quotations are. As nearly as our knowledge tells us. We might think we know, and then we might not know.

Q. You try to figure out what their quotation is likely to be, and then go it a little better?

A. Not always.

Q. When you are anxious for the business, I mean?

A. Yes; sometimes.

Q. Do you keep familiar with the Iron Age quotations?

A. To a certain extent, yes.

Q. Do you know whether or not the prices as quoted in

the Iron Age or other trade papers are the prices that are uniformly obtained for the products quoted?

A. To a certain extent. We use it as more of a guide, in making up our minds.

Q. Do you generally quote the prices that are stated in the Iron Age, or do you ordinarily quote something above or something below, according to trade conditions?

A. It all depends upon trade conditions as we see them. Sometimes above and sometimes below.

Q. Do you ever tie yourself down in any way in your quotations to the trade paper prices?

A. No.

Q. Do you know of any of your competitors who does?

A. I do not know of any of them who does.

Q. Did you ever attend any of the Gary dinners?

A. Yes, sir.

Q. Did you ever attend any of the committee meetings following the Gary dinners?

A. Yes, sir.

Q. Meetings of what committees?

A. Billets, sheets, pipe and, I think, perhaps, plates.

Q. What transpired at those meetings?

MR. COLTON: I object on the ground that that is too broad a question, covering all the different products and all the different committees. It ought to be separated for the different committees. May I ask to have the committees read that the witness said he attended?

MR. LINDABURY: Yes. I will tell you what he said: Plates, billets, sheets and pipe. Just put them down.

Now, you may answer the question, Mr. Westfal.

(The stenographer repeated the question as follows:)

"Q. What transpired at those meetings?"

By MR. LINDABURY:

Q. I mean to ask you now, generally.

A. We met for the purpose of arriving, perhaps, at a better understanding of business conditions.

Q. Were statements made at those various meetings by

representatives of manufacture in their line with regard to business conditions affecting their branch of the industry?

A. Yes.

Q. Were any agreements, express or implied, written or verbal, entered into at any of those meetings which you attended, either for the fixing or maintenance of prices in any steel product?

MR. COLTON: I object to the question as calling for a conclusion instead of exactly what was done and what was said with respect to prices; and as improper on direct examination.

THE WITNESS: No agreements were entered into of any kind at any time.

By MR. LINDABURY:

Q. Were statements ever made by persons present as to the prices that they were charging?

MR. COLTON: I object to that; the question is leading, and this line of examination is leading. All the questions should be as to what was done.

THE WITNESS: Yes.

By MR. LINDABURY:

Q. Were statements made at any of those meetings by persons as to the prices they expected to charge?

A. Yes.

Q. Were statements made at any of those meetings by any person present as to whether or not they were willing to enter into agreements with respect to prices?

A. I do not think so.

Q. Did any of the persons present declare themselves on the subject as to whether they would do it or not?

A. I never heard anything of the kind.

Q. Did anybody state any price to be maintained by him or his company for any given period of time?

A. No, sir.

Q. Was there at any of those meetings any understanding or agreement that the price named by any representative would continue until the next meeting or until any other time?

MR. COLTON: Objected to on the ground that the question calls for a conclusion on the part of the witness as to others than himself, and on the further ground that the question is leading and not calling for what took place at the meetings.

THE WITNESS: No statements of that kind were made.

By MR. LINDABURY:

Q. Was anything said or done by any representative of any manufacturer at any of those meetings which you attended which would have prevented him, had he observed it, from changing his price, changing the price stated, at any time thereafter when he saw fit, according as business conditions required from his point of view?

MR. COLTON: I object to the question as calling for a conclusion on a complicated set of statements and conversations, instead of calling for what was done and said, and that these are not disclosed to the Court, and that the witness is called upon to give an opinion upon matters not disclosed to the Court.

THE WITNESS: No.

MR. LINDABURY: Take the witness.

CROSS EXAMINATION.

By MR. COLTON:

Q. Who were the members of the billet committee?

A. I could not give you the members of the billet committee from memory.

Q. Did you ever attend any meeting of the billet committee?

A. Yes, sir.

Q. How many members were on the billet committee?

A. I do not know who served on the committee; the various manufacturers present—there were a number of manufacturers present. Just who served on the committee I do not know.

Q. Did John A. Topping, the Chairman of the billet committee, ever attend in person, so far as you know?

A. He may have attended some of the meetings.

Q. Do you recollect his attending any of the meetings?

A. No, I think a couple of meetings I attended were represented by other people of the Republic.

Q. Then you only attended one or two meetings, didn't you?

A. Only two meetings of the billet committee.

Q. When you say a couple do you mean two or three or four?

A. I think there were two that I distinctly remember.

Q. Where were those meetings held?

A. At Pittsburgh.

Q. And when was the first meeting that you attended, as nearly as you can recollect?

A. I think it was early in 1908.

Q. Do you know whether there had been any previous meeting of the billet committee prior to that or not?

A. No; I cannot tell you.

Q. You do not know how many meetings there may have been of the billet committee at which you were not present?

A. No.

Q. Was E. C. Felton present at that meeting?

A. I think he was.

Q. Was A. C. Dinkey of the Carnegie Steel Company present at that meeting?

A. He was there.

Q. Was E. A. S. Clark of the Lackawanna Steel Company present?

A. He was there.

Q. Was J. A. Campbell of the Youngstown Sheet & Tube Company present?

A. He may have been present at one of the meetings; one he was not.

Q. Was Howard Wood of the Alan Wood Iron & Steel Company present at that meeting of the billet committee that you attended?

A. I do not think so; I do not think he was there.

Q. Can you at the present time recollect what Mr. Topping said?

A. I do not think Topping was there at that meeting.

Q. Can you recollect what Mr. Felton said at that meeting?

A. No.

Q. Not a thing?

A. I do not know that he made any remarks.

Q. You do not know whether he spoke or not?

A. No.

Q. Do you recollect what A. C. Dinkey of the Carnegie Steel Company said?

A. No.

Q. Can you recollect whether he spoke on the prices of the Carnegie Steel Company at all or not?

A. I would not say whether he did or not; I am not sure.

Q. Can you recollect whether E. A. S. Clark made any statement at that meeting?

A. Yes; I think Mr. Clark did make a statement.

Q. Do you recollect whether Mr. Willis L. King made any statement at that meeting?

A. I would not say whether he did or not.

Q. Do you recollect the statement of Mr. Clark now so that you could give it in some detail?

A. Not with any degree of accuracy, no.

Q. And I believe you said you did not know whether Mr. King made any statement or not?

A. I do not remember that.

Q. Were you the only member of your company that was present at that meeting?

A. Yes; I think I was.

Q. Do you know as to whether at other meetings other members of your company attended?

A. Yes; I think there was another meeting or two perhaps, that our president was at.

Q. But you did not attend the other meetings?

A. No, sir.

Q. Do you recollect what you said at that meeting?

A. I do not know as I took any general part in the meeting at all.

Q. Could you give approximately the date on which that meeting occurred?

A. I would not care to say, no.

Q. And do you know how far it was before the next succeeding Gary dinner or how far it was after the preceding Gary dinner?

A. No, I would say it was probably January or February, 1908, when the first one was held.

Q. What other members were there besides those that you have spoken of? Give the other persons present at that meeting?

A. Well, I think the Cambria Steel were represented by Mr. Krebs and Mr. Price; I think they were there; Jones & Laughlin, I am not sure whether Mr. King was there; I think Mr. Haynes was there, and Mr. Dinkey and Mr. Siebert of the Corporation.

Q. What position did Mr. Siebert hold?

A. I think he is assistant general manager of sales; that is his title.

Q. Will you name all the other persons that you recollect who were present at that meeting, and the companies they represented?

A. Well, Mr. Rowe was there of the Pittsburgh Steel; I think young Mr. Campbell was there of the Youngstown Sheet & Tube. I have not mentioned their names. Mr. Rounds was there, I think, of the Republic, and perhaps Mr. Bray. I would not say for certain.

Q. Mr. Bray being then of the American Sheet & Tin Plate Company?

A. No, that is a different Mr. Bray.

Q. This Mr. Bray that you speak of is of the Republic?

A. He is now president of the Republic.

Q. Is that all that you can recollect that were present?

A. There may have been others, but I do not recall.

Q. Are those the principal billet makers?

A. Yes, I think they are.

Q. Now, the second meeting at which you were present: Was Mr. Topping there?

A. I would not care to say; I do not think he was there.

Q. Was Mr. Felton there?

A. It was practically attended by the same people; it was several years ago.

Q. Can you recollect the statement of any individual at that meeting with sufficient accuracy to state just what was said by them?

A. No, I would not care to do that.

Q. Can you state in substance what was said by any particular individual?

A. No, I would not want to go on record as quoting what anyone else said. I do not think I could do that at this time.

Q. You can not give us a statement as to how many of the members there expressed any opinion as to price?

A. There was very little talk about the price, except that each individual might say what their present price was, and what they expected to quote, and that was based on the conditions as they found them, and the demand was either great or small.

Q. They would state the price they intended to quote?

A. That sometimes happened; I may have done that myself.

Q. Did you say what price you were going to quote?

A. I might have done that, that it was our intention to quote such and such a price.

Q. And you intended to continue to quote that price?

A. Until we changed our mind.

Q. You did not intend to go right out from the meeting and change your mind right off?

A. No, not ordinarily, no.

Q. Didn't you ordinarily intend to advise the other people that you were going to change that price, or some of them?

A. Only to the extent that might be regulated by our own ideas of decency.

Q. I understand; it is only to that extent; but by your ideas of decency, you would feel that after having stated that you were going to quote such and such a price, that if within a very short time after that you decided to quote differently, you would advise the others that you were going to do it?

A. I may have stated to one or more of them, or may have

felt that I should have stated to one or more of them, if we found conditions different, that we should.

Q. You felt, without any legal obligation on you at all, you felt that moral obligation on you?

A. There was probably a certain kind of moral obligation.

Q. Would you in such a case as that notify the chairman, ever?

A. I would not notify any particular one; at least I did not feel that I should.

Q. But you would notify some of the other members?

A. Yes.

Q. In what way would you give that notice?

A. I might have called them on the telephone, or something of that sort.

Q. Now, you only attended two of those billet meetings, so that you have no knowledge as to what took place at any of the other meetings, of course?

A. No; there may have been more. I may have attended more myself, I don't know.

Q. Now, take the sheet committee: I will turn to some of the different members, and maybe it will help refresh your recollection.

Mr. I. M. Scott was the original chairman of that committee, wasn't he?

A. I believe he was, yes.

Q. And he was at that time president of your company?

A. Yes.

Q. And Mr. C. W. Bray attended them for the American Sheet & Tin Plate Company at times?

A. C. W. Bray, yes.

Q. Did you see Charles Hart of the Inland Steel Company at any of the sheet and tin plate meetings?

A. I do not know that I ever met Mr. Hart; there were other representatives of their company, Mr. Block and Mr. Jones.

Q. How about the National Enameling & Stamping Company?

A. Yes, occasionally, Mr. Niedringhaus.

Q. Did Mr. Campbell ever attend any of those meetings?

A. James A.?

Q. Yes.

A. Yes, sir.

Q. Did he usually preside at those meetings?

A. He did.

Q. Now name all those that you can who attended. Well, suppose we confine it now to the first meeting. Name all you can who attended the first meeting.

A. I would prefer that you would combine the meetings, because there were various——

Q. (Interposing) Just a moment. I would rather have you take up the first meeting and name all you can who were present at the first meeting.

A. I would not care to specify it that way. I will tell you approximately, as I can recall, men who attended the different meetings, probably three or four or half a dozen different meetings.

Q. What was the first meeting that you attended, as nearly as you can recollect, in point of time?

A. I would say it was along in the latter part of January, 1908, it may have been early February.

Q. About the same time that you attended a billet committee meeting?

A. In that neighborhood, yes.

Q. But you cannot recollect now with sufficient definiteness to state any single individual who was present at the meeting, other than yourself, the first meeting?

A. Oh, yes; I think I could.

Q. All right, I wish you would do it as far as you can.

A. Mr. Campbell, of the Youngstown Sheet & Tube Company; the American Sheet & Tin Plate Company, represented by Mr. Bray, and perhaps others; the various Canton companies, I think the Niles Iron & Steel Roofing Company, and the American Rolling Mill Company of Middletown.

Q. Please give the individual wherever you can, who represented them.

A. What companies have you got there without an individual?

(The stenographer repeated the last answer.)

THE WITNESS: The Niles Iron & Steel Roofing Company, Mr. Thomas; the American Rolling Mill Company, of Middletown, usually Mr. Phillips and Mr. Horner; the Wheeling Corrugating Company, usually represented by Mr. Abbott and sometimes by Mr. Glass; the Newport Rolling Mill Company, sometimes by Mr. Andrews. There may be other steel manufacturers, but I do not recall just at the moment.

By MR. COLTON:

Q. Without going into detail, you would not feel under any legal obligation as to following the price that you stated you were going to quote, you would feel under the same sort of moral obligation that you felt as you stated in respect to billets?

A. I would think so.

Q. Now, when you got there, there were a great many people there at these sheet committee meetings?

A. Fifteen or twenty or twenty-five. The manufacturers were very well represented.

Q. That took in probably about ninety per cent. of the production of the United States, didn't it?

A. It may have.

Q. Did all of them go there with the same price to start with?

A. I do not know about that; I do not know what price they came there with.

Q. You don't know what price they came there with?

A. And I would not say that they went away with the same price.

Q. I didn't ask you what they went away with; I asked whether they came there with the same price.

MR. COLTON: I object to that answer as volunteered. Will you repeat my question?

(The question was repeated by the stenographer.)

By MR. COLTON:

Q. (Continuing) My question was whether different manu-

facturers came there with some one price in their mind as a market price?

A. Not to my knowledge.

Mr. Lindabury: I object to that question, because the witness could not know what was in their minds, except as it was disclosed, and the question did not ask for the disclosure.

Mr. Colton: Your direct examination called for such things.

Mr. Lindabury: I think I asked him what they said, and you asked what they thought; that is the only difference.

By Mr. Colton:

Q. You made announcement as to the price at times, did you?

A. Yes.

Q. Just what form did you put that in, if you remember? If you do not, don't just say "probably."

A. The form we would put it in was that we expected to make such and such a price.

Q. And a large number would make a statement as to the price they expected to make?

A. Yes.

Q. And frequently a majority of them, when you got through, had made a statement as expecting to get a price, each of them stating it separately, that was the same?

A. Yes.

Q. And did it sometimes happen that all of them made a statement that they were going to get a price that was the same? All of them speaking separately, of course?

A. It may have happened that they all responded.

Q. Did the chairman call on you in regard to that, or did you just get up without any order?

A. He may have asked me whether I had anything to say.

Q. Did he begin with you alphabetically?

A. I do not think there was any order, that I know of.

Q. And each of you made a statement, as called on? Did sometimes a man refuse to make any statement as to what price he was going to quote?

A. I do not recall that any one did.

Q. How many sheet committee meetings did you attend?

A. There must have been three or four, or half a dozen.

Q. And others were attended by other members of your company?

A. I think I attended them all, and Mr. Scott may have been there occasionally.

Q. You do not mean to say there were only three or four sheet committee meetings?

A. That is about all that I remember.

Q. All that you attended, perhaps? I am not criticizing that; you do not pretend to speak as to how many meetings there may have been that you did not attend?

A. No; they may have had some that I did not attend.

Q. Now, in regard to plates, without going into detail to start with, did you feel the same sort of moral obligation as to quoting prices that you stated in respect to sheets and billets?

MR. LINDABURY: Now, I object, because the witness has stated no moral obligation whatever in regard to sheets or billets. The question assumes an answer that has not been given.

MR. COLTON: Yes, I think he did. Repeat the question.

(The question was repeated by the stenographer.)

THE WITNESS: The same answer would hold good for all.

By MR. COLTON:

Q. Did you at any of these meetings ever hear an individual spoken to in respect to a price, as having sold at a price different from that which he had announced at a previous meeting?

A. No, I don't think so.

Q. Your memory is not very distinct on that point?

A. No, I don't think so. There may have been some discussion that certain prices prevailed in a certain locality, and if any one had any information to give, it was offered.

Q. Just what would that information be? State the substance of that information.

A. Well, to illustrate, our agents might have reported a

price in St. Louis, New Orleans, Kansas City or New York, or some other place.

Q. What would be said about that at the meeting?

A. The only thing that would be said would be "We understand that such and such prices have been made in New York; do you know anything about it, or does anybody know anything about it?"

Q. And then somebody would make some report in regard to that, sometimes?

A. Not as a rule; if they happened to know of a certain instance, they might.

Q. And if they did know of a certain instance, they would give that instance, would they not?

A. They might do it, yes.

Q. What would that instance be?

A. I do not know; I would not care to say. It has been so long ago that I do not recall.

Q. But there were instances of that kind?

A. Generally speaking, yes; I can not identify any particular incident.

Q. What do you mean by incidents of that character? I do not know just what you mean; at least I am not very sure.

A. The only thing I mean, there might be a general report made as to certain market conditions in certain localities, and that might be discussed, and if any one could throw any light on the subject, they might do it.

Q. You spoke of a particular individual knowing something about it.

A. No, I do not think of any particular individuals; I say if any one did, they might throw some light.

Q. If any one did; well, there were occasions where certain people would know about what brought about that particular condition that you refer to?

A. I would not care to answer; I do not know that I could answer it.

Q. That is, you do not recollect on that one way or the other?

A. No.

Q. What sort of condition was that? Was that below the

price that the majority had announced that they were going to quote, at the previous meeting?

A. There may have been some incidents of that kind.

Q. Did you ever speak, yourself, of any substantial cut that you knew of, from the price that had been announced by the majority at a previous meeting?

A. No, I don't think so; I do not recall that I did.

Q. You would not be positive that you did not?

A. No, I would not be positive that I did not.

Q. At times such things as that were spoken of, were they not?

A. They may have been referred to.

Q. Your recollection on that is rather hazy either way, is it not?

A. More or less vague.

Q. It being a long time ago, your recollection of what happened at these meetings is rather hazy?

A. You might refer to it that way.

Q. You were not chairman of any of the committees?

A. No, sir.

Q. And you did not send out applications for the members to come into any of the meetings?

A. No.

Q. And you did not receive whatever reports were made, did you?

A. I do not know of particular reports made.

Q. You do not know what particular reports Mr. Campbell may have gotten?

A. No.

Q. You would not feel like disputing any statement that he may have made as to reports received by him?

A. Not at all.

Q. In other words, that is beyond your knowledge either way?

A. Yes.

Q. What was the last time that you attended any kind of meeting of this character that you have described, as nearly as you can give it?

A. Oh, they attended at irregular intervals for about a year, I would say.

Q. That would bring it down from the spring of 1908 to the spring of 1909, approximately, wouldn't it?

A. Yes.

Q. Then there was a break in that class of meetings, wasn't there?

A. Yes.

Q. And there was a break in the market prices, wasn't there?

A. Yes; there was some break in market prices.

Q. And then after a considerable period of time there were other meetings?

Did you attend any of them?

A. I do not recall that there were any other meetings.

Q. You do not mean to say that you know nothing about whether there were other meetings? You mean to say merely that you do not recall attending any others? Is that it?

A. Yes, sir.

Q. Don't you recall attending any meetings subsequent to 1909?

A. No, I do not think so.

Q. Then, if there was any similar meeting, so far as you know, your company was not present at those meetings?

A. They were not represented.

Q. So of course you would not undertake to say as to what took place?

A. No.

Q. Now, you spoke of keeping in just as close touch as you could as to what prices your competitors were charging?

A. Yes.

Q. Other than from your own salesmen what information do you have on the subject of the prices of your leading competitors?

A. We may have certain customers that will talk frankly to us; they talk frankly to our salesmen. You don't care for that.

Q. Not just for the present. I am just asking that because I think you mentioned that on your direct examination.

A. As a guide we refer to such trade data as we can pick up anywhere.

Q. And that trade data would include such trade papers as the Iron Age and Iron Trade Review?

A. Yes, sir.

Q. Do you ever give to the agents of the Iron Age your opinion of the trade conditions or quotations on prices?

A. They talk to me occasionally. I may tell them approximately what I regard the market.

Q. Do you tell them approximately what you regard the market to be or approximately what you regard your quotations?

MR. LINDABURY: He has already answered you. Ask him if he tells the price.

THE WITNESS: I would not care to change that answer.

By MR. COLTON:

Q. I want to know which you do.

A. I do not follow you.

Q. Do you tell him approximately what the market is? He comes around to you and you tell him approximately what you regard the market?

A. What we regard it, sometimes.

Q. What do you say to him?

A. I might tell him if it happens to be on the matter of plates that I regard the market to-day as $1.50 or $1.40 or some other price.

Q. What does he say to you?

A. They do not question the statement at all.

Q. I do not suppose they question the statement. I don't question your statement. You understand that?

A. Certainly.

Q. I am trying to get at this conversation that takes place between you and this representative of the Iron Age or other trade paper that comes to you.

A. I suppose they see the different people in the trade and couple it up with what they can get from other sources in the country, and then they arrive at some price to be published.

Q. You see I am very ignorant on this subject, and I don't know what the representative says to you when he comes in to you. Take the period during the last few years, has there been any variation in what he usually says to you when he comes in to see you?

A. He don't come around at any regular time; it is accidental. He may call on the telephone or we may occasionally meet him and talk with him the same as we would with anybody else.

Q. What would he say to you in regard to price, when he met you?

A. I might ask him what he regarded the market; what other people were doing.

Q. Do you ever recall his having asked you any question, any specific question?

A. He might ask me "What do you regard the plate market, and what do you regard the market on sheets or pipes?" or anything else we sell.

Q. You say he might. Do you mean to say that he ever did put this question in that form?

A. Yes, I would say that he might have asked me at some special time; I would not care to give the time and place, but he might ask me "What do you regard the market on plates?" It would mean the same thing. He might not put it just that way.

Q. It would mean the same thing as what; what would he mean when he asked you "What do you regard the market"? Do you know what information he wants to get from you?

A. Yes, he wants to get information as to price.

Q. Does he ever ask you what your price is; what prices you are quoting?

A. That would be a delicate question. I do not know that they would put it in that way.

Q. Do the trade paper men ever see anyone except you in your company?

A. They may.

Q. How long have the trade representatives been in the

habit more or less frequently of conferring with you in regard to prices?

A. I have known them for years.

Q. I mean how long have they conferred with you in the way that you have spoken of?

A. I suppose during my connection with the present company.

Q. Your duties have changed somewhat; that is, you have become a little more important as time has gone on?

A. Maybe so.

Q. And at all times these individuals may have conferred with your superior officers in regard to price?

A. They may have done that.

Q. Now, when you stated that you believed the market to be so and so, what were you basing your statement on?

A. General information that I might get from any source.

Q. Including the trade papers, I suppose?

A. Including the trade papers.

Q. Now, do you know what prices are quoted in the trade papers?

A. I see them.

Q. Do you know from what sources they get that?

A. No.

Q. You do not know that those are the prices of the Pittsburgh mills?

A. No, I do not know how they get them.

Q. Would you know that those were generally understood to be the prices of the Pittsburgh mills?

A. They come pretty close to giving the prices that prevail from time to time.

Q. These prices of the trade papers as you say are not absolutely exact, but they are pretty close to the prices that prevail, is that right?

A. That is it; they come pretty close to the market from time to time.

Q. And that is true of all these various products which you mention?

A. I think so.

Q. Now, you make pipe?

A. Yes, sir.

Q. Did you ever attend any of the pipe meetings presided over by E. C. Converse, of the United States Steel Corporation?

A. No, sir.

Q. Did you ever attend any meetings prior to these so-called Gary committees?

A. No, I do not recall any.

Q. Do you mean to say that you never attended any of those various meetings that took place in the trade prior to the appointment of these Gary committees?

A. No, I do not think so.

Q. You do not know to what extent such meetings existed, then, do you?

A. No, I do not know to what extent they existed; if there were any I did not know it.

Q. What was your tonnage in billets in 1901; do you go back that far?

A. No, 1903.

Q. All right, give your tonnage as near as you can in 1903.

A. Well, I would have to give you what our estimated output would be; that is as near as I could come to it.

Q. At that time?

A. Yes, sir.

Q. You have a pretty distinct recollection of what it was?

A. No, I do not know what we made. You see our company only started to build in about 1900.

Q. Suppose you take it for 1904, if you cannot recollect about 1903. That would be after you got in operation.

A. We have increased our output of raw steel about 25 per cent.

Q. Since 1904?

A. Since 1904; yes, sir.

Q. Now, what proportion of your steel do you sell as billets?

A. Very little of it now.

Q. Formerly you sold more?

A. We sold more of it. We have been adding finishing mills during the interim.

Q. What quantity, approximately—I have forgotten—Oh, 400,000 tons was your maximum capacity?

A. Yes.

Q. That is the theoretical capacity?

A. Yes, sir.

Q. What is the maximum output that you ever had in ingots?

A. It is approximately that. It may not be quite that high.

Q. I notice that in estimating your capacity you give us ingots; and I understand that to be because the ingot is a sort of basis of the steel industry. Is that right?

A. That is right.

Q. And you can judge the size of the company about as well from its ingot output as anything?

A. I would think so.

Q. Of course its strength may depend on its ore reserves, its transportation facilities, and a great many other things? Is that so?

A. Yes, sir.

Q. But you could not give me any better criterion than the ingot production to tell, in general, about what it could do, in steel?

A. I think that is as fair as any other.

MR. LINDABURY: I think that is what we have been taking with others.

MR. COLTON: I think that is true, Mr. Lindabury. I think it has generally been conceded that that is so.

By MR. COLTON:

Q. What did you give as the maximum output?

A. I did not give the maximum output. I said the production was approximately 400,000 tons per annum.

Q. That was your theoretical capacity?

A. Yes. I could not tell you what our output had been in any one year. It would be very easy to get our records and show.

Q. Of course. Whether it be 300,000 tons or 250,000 tons

or 350,000 tons you could not say, within 50,000 tons of your maximum capacity?

A. I would not care to go on record as to that, no. It is very easy to get the exact information.

Q. How much of your output is pipes? Maybe you are not familiar with that side of your business. If you are not, just say so.

A. I am familiar with it. About 15 per cent.

Q. About 15 per cent. is pipes? What kind of pipes; iron or steel?

A. Steel.

Q. What per cent. is plates?

A. I would say about 40 per cent.

Q. And cut nails: Are those steel cut nails?

A. Yes.

Q. What per cent. is nails?

A. That would be rather small; say five per cent.

Q. You have named your percentage in pipes and in plates; how about sheets?

A. In the neighborhood of 20 per cent.

MR. COLTON: That is all.

REDIRECT EXAMINATION

By MR. LINDABURY:

Q. You spoke of the delicacy of giving your own prices to the trade journals.

A. I think you misunderstood me. It was the inferred question that would be rather delicate on the part of the representative of the trade paper.

MR. COLTON: That is the way I understood his answer.

MR. LINDABURY: All right. I think you are quite right.

By MR. LINDABURY:

Q. You do not recollect, then, their asking you for your particular prices?

A. No, sir; I do not think they would put it that way.

Q. I take it you were not in the habit of giving them your individual prices, were you?

A. Not as a rule; not unless we would gain something in return.

Q. Ordinarily you kept those to yourselves, for business reasons, did you not?

A. Pretty much to ourselves.

Q. When you spoke of the price quoted in the trade journals coming pretty close to the actual prices, did you mean they approximated them on the general average?

A. I do not know how they arrived at them. I suppose that is the way they got them.

Q. You did not mean by that that everybody sells pretty close to them, but only that that approximates the average of the prices that the different ones got?

MR. COLTON: I object to the question as argumentative and——

MR. LINDABURY: Take the question out then.

By MR. LINDABURY:

Q. When you stated that the price came pretty close to the selling price, did you refer to the average of the actual prices or the individual prices?

MR. COLTON: Just a moment. I object to that question as suggestive, and that the previous answer is clear and no further explanation is required.

MR. LINDABURY: It is neither leading nor suggestive and the previous answer is not at all clear.

THE WITNESS: I think I referred to the average.

By MR. LINDABURY:

Q. In assenting to some question of Mr. Colton's which assumed a moral obligation attending the man departing from one of the committee meetings, what did you mean?

A. I think I answered that before, as to what I would regard——

MR. COLTON: May I put in an objection there? I object to referring back to my examination in that way, as so comprehensive that the witness can not carry in mind all the different questions that I asked him on that subject, and that if you

wish to bring out any information, it ought to be done by asking the witness in detail about what was done.

MR. LINDABURY: I think the witness understands what I mean, and so do you, by that question.

(By request, the stenographer repeated the pending question.)

THE WITNESS: I think I answered that before, as to what I would regard as our idea of the decent thing to do.

By MR. LINDABURY:

Q. I will ask you, at the expense of repetition, to re-state what was the whole scope of that obligation of decency.

A. Well, I suppose that the obligation of decency was this: That if we changed our minds, and business conditions suggested the changing of our minds, and we were going to do entirely different, perhaps, than we had expected to do, that we would in some way let somebody else know about it.

Q. Was that the whole extent of the obligation that you had in mind in your answer?

A. I think so.

MR. LINDABURY: That is all.

RECROSS EXAMINATION

By MR. COLTON:

Q. Do you happen to know, of your own knowledge, whether after these meetings where you all had finally, as happened on some occasions, individually expressed an intention to quote the same price, that the trade paper got that price from one or more members of the committee?

A. They may have gotten it in that way. I do not know.

Q. You do not know how they got it?

A. No, I do not know.

Q. Do you know as to whether they got it or not?

A. I could not answer that.

MR. COLTON: That is all.

MR. LINDABURY: That is all.

(Whereupon a recess was taken until 2:15 o'clock P. M.)

AFTER RECESS

HERBERT SANBORN SMITH

was called as a witness, on behalf of the defendants, and being first duly sworn, testified as follows:

DIRECT EXAMINATION

By Mr. Lindabury:

Q. Where do you live, Mr. Smith?

A. I live near Ossining, New York.

Q. What is your business?

A. I am the vice-president and general sales agent of the Standard Steel Company of Birmingham, Alabama.

Q. What is your age?

A. Fifty-three.

Q. How long have you held your present position?

A. Nearly three years.

Q. Were you ever connected with the Lackawanna Steel Company?

A. Nearly five years; between 1905 and 1910.

Q. In what capacity?

A. I was general sales agent at that time.

Q. What were your duties?

A. I had entire charge of the sale of the output of the company, making prices and distribution, and the usual duties of a sales manager.

Q. Had you had previous experience in the business?

A. In the selling business; yes, sir.

Q. I mean, of steel products?

A. Oh, yes.

Q. What, during that period of time, was the business in which the Lackawanna Company was engaged?

A. They were engaged in the manufacture of pig iron, ingots, slabs, steel billets, steel rails, steel shapes, plates, bars and rail accessories.

Q. Where were their works situated?

A. At Buffalo, New York.

Q. Where was their market?

A. Their market covered practically the entire United States.

Q. Did they have any foreign trade?

A. They had a very small trade in rails.

Q. Did they reach the Pacific Coast?

A. On rails, yes, sir; and in some cases structural shapes and plates.

Q. What was their output in tonnage?

A. It was approximately 1,000,000 tons a year.

Q. Did they sell semi-finished as well as finished materials?

A. Oh, yes, and billets and slabs.

Q. And you mentioned those?

A. Yes.

Q. Was or not their product sold in competition with the product of other manufacturers of steel?

A. Always.

Q. Was it sold on a competitive basis?

A. Always competitive.

Q. Was competition in those products keen or otherwise?

A. It was always keen, and a great many times very aggressive.

Q. Who were the leading competitors?

A. The leading competitors were the mills of the Steel Corporation, the Carnegie Steel Company——

Q. The mills of the Steel Corporation that made the articles that you have mentioned?

A. Yes.

Q. We know what they are by the record. Name any others.

A. The Jones & Laughlin Steel Company; the Inland Steel Company; the Cambria Steel Company; the Pennsylvania Steel Company; the Eastern Steel Company; the Carbon Steel Company; the Maryland Steel Company; there were some others that I do not remember for the moment.

Q. Who was charged with the duty of fixing the prices at which the Lackawanna's products were sold during this period?

A. In general, and in almost every case, I had the fixing of the prices.

Q. Were the prices fixed by you fixed in agreement with your competitors or independently?

A. There was no agreement: always independently.

Q. Does that answer hold for the whole period of five years that you were managing their sales?

A. During the period that I have mentioned; yes, sir.

Q. Was there any time during that period when the prices that you either quoted or fixed were quoted or fixed in agreement with any of your competitors as to any article that you sold?

A. No, sir.

Q. Were the prices that you quoted uniform with or variant from those quoted by your competitors, in so far as you were able to ascertain their quotations?

MR. COLTON: Just a moment. I object on the ground that the witness has not been shown to be qualified to answer this question.

THE WITNESS: The prices were both uniform and variant.

By MR. LINDABURY:

Q. Under what circumstances and to what extent were they uniform?

A. They might have been uniform on steel rails in some cases, and they might have been uniform on steel plates and shapes in some cases; but not necessarily so.

Q. How did it happen that they were uniform on plates, if they were?

A. We were following at that time what we called the market price, and as a rule we tried to obtain the so-called market price. It was a matter of pride with a steel manufacturer to sell his goods at as high a price as that of any other manufacturer, and if the leading makers were getting $1.60 we felt it was up to us to get the same price, hence the uniformity in prices.

Q. Were you always able to get the prices that you tried to get?

A. No, sir.

Q. What did you do then?

A. We sometimes found means of shading it.

Q. Did the extent of your order list or books have anything to do with it?

A. It was a great factor in making prices, the terms of payment and deliveries.

Q. How did those circumstances affect your quotations?

A. If the mill was short of orders in any one line special efforts were made to get business in that particular line, and in such cases the seller is inclined to be rather more moderate in his demands, as to price, terms of payment, and all of that.

Q. How was it in regard to the other products that you mentioned, other, I mean, than rails and plates?

A. Do you refer to bars or rail accessories?

Q. Other than rails or any accessories of rails that were governed by the price of rails.

A. Well, there was a great freedom, quite a variation in prices on those materials, depending on specifications and the section and all of that. There wasn't any uniformity even in our own prices.

MR. COLTON: What were those materials?

MR. LINDABURY: All others than rails and plates.

THE WITNESS: Bars and rail accessories.

By MR. LINDABURY:

Q. Did your prices continue for any considerable length of time on a level, or did they vary up and down at different periods; your own prices, I mean.

A. They varied considerably both ways during the period I have mentioned.

Q. And is that true of everything except rails?

A. Yes.

Q. You spoke of uniformity in the price of rails; how did you happen to quote uniform prices on rails?

MR. COLTON: I object to that on the ground that the witness is not shown to be qualified on this subject.

MR. LINDABURY: That is, he is not qualified to know how he happened to quote the same price on rails every time?

MR. COLTON: That is my objection.

MR. LINDABURY: Well, I will have to disregard it. Go on.

THE WITNESS: When I went with the Lackawanna Steel Company I found that the price of standard Bessemer steel rails was $28 a ton at the mill; it had been fixed for some time, I do not know for how long a time. That price I adopted and never varied from it. It was tacitly understood that that was the price of our steel rails, as fixed by the Lackawanna Company.

By MR. LINDABURY:

Q. And so far as you were concerned that is what determined your quotations as to rails?

A. Absolutely.

Q. Were the prices on other products a matter of consultation between you and the President of your company at times?

A. Yes, not so frequently perhaps.

Q. On what occasions was that matter taken up in consultation, on larger orders?

A. On the larger orders, yes.

Q. And were the prices to be quoted on large tonnages sometimes fixed by such a consultation?

A. Very frequently.

Q. Were the prices thus considered and fixed quoted as the result of any agreement with any of your competitors?

MR. COLTON: I object to that on the ground that the witness cannot know that of his own knowledge.

THE WITNESS: No, sir.

By MR. LINDABURY:

Q. Was any statement ever made, in any of these conferences, by the President of the Lackawanna, of a price agreed upon with competitors which would be adopted or maintained by the Lackawanna?

A. No.

Q. Were you ever interfered with by any officer of the Lackawanna during the time that you were there, in quoting such a price as seemed to you in your best judgment to be warranted by business conditions?

A. I don't recall any such instance.

Q. Was any price ever named by you based upon any other consideration than competitive business conditions?

A. I do not think so; I don't recall it.

Q. Did you attend any of the meetings of committees of steel manufacturers during that time?

A. Yes; I attended a great many.

Q. During what period of time?

A. That was from 1905 or shortly thereafter until, oh, I should say through 1907, or possibly 1908.

Q. Where were those meetings held?

A. They were held in various places; sometimes in the offices of the different steel companies in Pittsburgh or New York, or at the hotels.

Q. What was done at those meetings?

A. At those meetings we had a general discussion of business conditions, the state of the market, the trend of railroad buying or shipbuilding, new building construction, crops, and all the determining factors with reference to our business. We often discussed technical questions like boiler plate specifications and steel rail specifications, and matters which were brought up by the engineers of our customers, who were getting more and more exacting. In fact everything that pertained to our mutual interest we discussed.

Q. Were any agreements as to prices made at any of those meetings?

MR. COLTON: Just a moment; that is objected to on the ground that the question calls for a conclusion instead of asking the witness just what took place at those meetings.

MR. LINDABURY: You cannot prove a negative by asking him what took place. At least I have never been able to. Go on.

THE WITNESS: I beg pardon; I do not remember the question.

(The question was repeated by the stenographer.)

THE WITNESS: Prices were fully discussed, but no agreements were made. In point of fact it was frequently and almost invariably stated in those meetings by the Chairman and others that we could not make any agreements, nothing

that would be binding on the members attending those meetings.

By Mr. Lindabury:

Q. And were the prices quoted between meetings variant?

A. The usual procedure was to——

Q. No, I do not believe you understood me. I am not talking now of what took place at a meeting.

Mr. Colton: I think the witness ought to be allowed to continue his answer. The question had been asked. I object to counsel interrupting the witness in the middle of an answer.

By Mr. Lindabury:

Q. Were you about to state the procedure at a meeting?

A. In reply to your question; yes, sir.

Q. That was not my question. My question was whether between meetings there was a variation in prices.

A. Always a variation in prices; in point of fact, I never knew at any time what price might be quoted for minimum or maximum by any of my competitors. I never could be sure of it.

Q. And do you think any of them knew what price you were going to quote?

A. I know they did not.

Q. At any time during your service as sales manager?

A. They might make a shrewd guess sometimes, but they did not know.

Q. And I suppose you took particular pains to make their guess as far wrong as you dared?

A. Well, that was the part of salesmanship to do that.

Q. Were their quotations and yours, in so far as you were able to learn of theirs, the same, or were they variant?

A. They were frequently the same, and just as frequently variant.

Q. How happened they to be the same, when they were the same?

A. They were the same because, as I said in answer to a previous question, we always tried to follow naturally just what we called the going market price. The weaker mills, or those mills not all full of business, might quote a lower price, and frequently did; those mills that were full would [illegible] e

a higher price so as to throw the business away, and there always was more or less variation in price.

Q. And does that answer describe the condition during the whole period you were with that company?

A. I should say yes.

Q. Was there any company that uniformly quoted higher prices than the others without regard to the state of their order book, or was sometimes one higher and sometimes another higher?

A. The so-called eastern Pennsylvania mills in adopting a policy of not selling ahead during periods of great demand would exact premiums anywhere from five to ten dollars per ton. On the contrary, the Corporation did not exact such premiums, it being their endeavor to prevent a runaway market, which resulted, naturally, in their order books being full up months ahead; whereas your smaller mills selling from day to day would feel the stress of a declining business much sooner than the Corporation, and which is a fact on account of their policy.

Q. Then how did the prices of the smaller concerns correspond with the prices of the Steel Corporation ordinarily and by and large during dull times?

A. They were usually lower than the Steel Corporation.

Q. And during flush times, how did they correspond?

A. They were higher.

MR. LINDABURY: Take the witness.

CROSS EXAMINATION

By MR. COLTON:

Q. In certain products does the Steel Corporation have a published price?

A. You mean a printed price?

Q. I mean one that is published and known to the trade.

A. Yes, sir.

Q. In what products does it have such price?

A. I mention wire products, for example; the price of wire nails to the jobbers is openly published by circular, which circulars are sent to the trade journals and so published.

Q. Any other products that they have published prices on?

A. Their prices are so well known that they are practically published; yes, sir.

Q. What papers will we find their prices practically published in?

A. In the Iron Trade Review, the Iron Age, and I think, the Iron Metal Market.

Q. Did you ever hear of independents spoken of as exacting a premium over the Corporation's price?

A. Frequently.

Q. And you frequently heard of them exacting that over the market price?

A. Yes, sir.

Q. The market prices and the Corporation's price frequently corespond; in connection with the exaction of a premium, I mean?

A. Yes; I define market price as the price established by one or more leading producers in that line.

Q. The United States Steel Corporation might be the one leading producer that would establish the market price as defined by you?

A. It might be; yes, sir.

Q. And there might be other Pittsburgh mills, or other mills that had that price at the same time?

A. Yes.

Q. When you spoke of usually in this particular production attempting to follow the market price, you were then speaking of following the price of the Steel Corporation and the other mills; I do not mean you did it exactly, but as I understood you, in shapes and rails and plates you attempted to follow the market price?

A. Yes, sir.

Q. And the market price is as defined by you on my examination just now; is that right?

A. Yes, sir.

Q. Now, what time in 1905 did you become connected with the Lackawanna Steel Company?

A. May 1st, 1905.

Q. And from whom did you ascertain that the price of standard rails was $28?

A. The price when I went with the company was $28, and had been fixed for some time before that.

Q. You do not know in what manner it had been fixed?

A. No, sir, I do not.

Q. I suppose you do know that the other steel makers had the same price for standard rails?

A. What do you mean, the same price?

Q. Well, I ask you just whether you know that the $28 was the usually quoted price on standard rails.

A. Price may mean f. o. b. mill, or may mean a delivered price.

Q. Of course in rails you know we speak of it as from the mill?

A. But you must understand that the price of steel rails varied very much by the different companies, depending entirely upon the amount of freight added to the mill price, and there was a vast amount of competition in steel rails at that time.

Q. The mill price usually that you quoted was $28?

A. $28, the mill; yes. That is on the standard Bessemer steel rails.

Q. That was the same price for each of the different companies in 1905 when you became connected with it?

A. Yes, we so understood it.

Q. And you so understood it in 1906?

A. Yes.

Q. And 1907?

A. Yes.

Q. 1908?

A. Yes.

Q. 1909?

A. Yes.

Q. 1910?

A. Yes.

Q. That is as long as your connection with that particular line of business continued?

A. That is right.

Q. Now, did you attend any of the meetings of the presidents of the different companies, of the different rail companies?

A. No, sir.

Q. You never attended any of the rail pool meetings that continued down into 1905?

MR. LINDABURY: I object; there is no evidence that they continued down to 1905. As a matter of fact, they did not.

MR. COLTON: I think they did. I asked the witness——

MR. LINDABURY: You stated that as a matter of fact meetings did continue down to 1905, but I say it is not a fact.

MR. COLTON: I think it is a fact.

By MR. COLTON:

Q. As to that, you may assume it to be a fact, for the purpose of answering, that you attended, and make any explanation.

A. I attended some rail meetings, but I never recognized any rail pool.

Q. Did you attend any rail meetings at which your president was present?

A. I think not. I do not recall it.

Q. Let us go at the first rail meeting that you attended. What was the first rail meeting you attended?

A. Those meetings were attended by the sales agents of the different rail makers.

Q. Had you had any extra in open hearth rails?

A. We did, later on, yes.

Q. Back in 1905 the rail business was pretty much standard rails, was it not?

A. Standard Bessemer; yes, sir.

Q. And in 1907, after the Lackawanna got into the market, there came to be more attention paid to open hearth rails?

A. Oh, yes; the tendency has been very strongly in that direction for the last four or five years.

Q. And the Lackawanna Company and the Tennessee Company and the Bethlehem Company were among those that got into the open hearth business earlier, are they not?

A. The Tennessee first, and, I think, the Bethlehem possibly came in next, and then the Lackawanna, and later on Gary, at South Chicago.

Q. In 1907, prior to the acquisition of the Tennessee Company by the United States Steel Corporation, its capacity in open hearth rails, compared with its capacity in Bessemer rails, was very small, was it not?

A. Yes, sir; very small.

Q. You do not know what its tonnage was in open hearth rails, do you, at that time?

A. No; I cannot recall it.

Q. Name the parties present at that first meeting in rails that you attended in 1905.

A. The individuals?

Q. Yes; and give the companies, at the same time, that they represented.

A. The Carnegie Company, Charles C. Cluff; for the Pennsylvania Company, I cannot remember who attended; for the Lackawanna, of course, myself; for the Cambria Steel Company I do not remember the name of their representative.

Q. Is that all the rail makers that were present at that first one?

A. Let me see. The rail business, then, was in the hands of Carnegie, Lackawanna, Cambria, Pennsylvania,—Bethlehem, I believe, were not making rails at that time.

Q. Did you mention the Maryland?

A. The Maryland Steel Company being a part of the Pennsylvania Steel Company.

Q. They were all represented as one?

A. Yes; and the Carnegie Steel Company and the Illinois Steel Company were represented by one man.

Q. And I suppose the Lorain Company?

A. By one man.

Q. Who usually represented the Carnegie Company, the Illinois Company and the Lorain Company?

A. During my time nearly always Mr. Cluff.

Q. Do you know his first name?

A. Charles C. Cluff.

Q. Just what was said at that first meeting you attended in rails, as nearly as you can recollect? It was a new thing; it was something rather impressive to you, I suppose, in your business, that meeting—or had you been in that class of meetings before?

A. I had been at a good many of them.

Q. You had had experience in the same class of meetings prior to that date?

A. Yes.

Q. In what connection was that?

A. I had attended trade meetings all my life.

Q. What do you mean by trade meetings?

A. Meetings of men in the same lines of business.

Q. And in these same general lines you attended trade meetings prior to that date?

A. We had our meetings on various commodities, you know, away back as far as I can remember, when I first went into the wire business.

Q. You had been in the wire business before, then?

A. Yes; I had been in the wire business before.

Q. But up to that time had you ever attended any meeting in rails?

A. No, sir.

Q. It was a different product, then, that you were dealing with?

A. Yes.

Q. Had you ever attended any meeting prior to that time in plates?

A. No, sir.

Q. Or structural?

A. No, sir.

Q. Your meetings up to that time had been in wire solely?

A. They were informal gatherings of men in the same lines of business. I mention that as showing that it was not a new experience to me to attend a meeting of men in one line or trade.

Q. What different wire lines did you attend meetings in?

A. I do not recall now. That was so far back.

Q. You had not attended for a good many years, then, in 1905?

A. No, sir; I had not attended for a great many years.

Q. What had you been doing during the period preceding 1905?

A. I had been with the Shelby Steel Tube Company, for one.

Q. You were an employe of the Shelby Steel Tube Company?

A. Yes, sir.

Q. During what period were you employed by them?

A. From 1900 to 1903. I think to the end of the year 1902, according to my recollection.

Q. Then you were with the Shelby Tube Company at the time it was acquired by the United States Steel Corporation?

A. Yes, sir.

Q. The Shelby Steel Tube Company made seamless tubes?

A. They made seamless tube, yes.

Q. Then it had been a great many years since you had been in meetings of that particular kind, or did you attend tube meetings?

A. No, sir; I never attended tube meetings.

Q. What was your position with the Shelby Steel Tube Company?

A. I was the assistant to the president.

Q. Who was the president at that time?

A. Charles T. Boynton.

Q. Was that before the Corporation took it over or after the Corporation took it over?

A. That was before.

Q. Who was president of the Shelby Steel Tube Company after the Corporation acquired it?

A. I do not remember.

Q. How long were you with that company after it was acquired by the Corporation?

A. I was not with it at all. I left it at that time.

Q. You left it as soon as it was acquired by the United States Steel Corporation?

A. Yes, sir.

Q. What did you do immediately after that?

A. I went into business in New Haven, Connecticut.

Q. You were connected with the New Haven Iron & Steel Company; was that it?

A. No; it was called the National Wire Corporation, and later on the National Steel & Wire Company.

Q. Is that company in business to-day?

A. No, sir.

Q. What became of that company?

A. That company went into the hands of a receiver, and the plant in New Haven was finally purchased by the United States Steel Corporation.

Q. Has that plant ever been used?

A. Oh, yes.

Q. By the United States Steel Corporation?

A. Yes, sir.

Q. Is it in use today?

A. Yes, sir.

Q. It was bought from the hands of the receiver?

A. Yes.

Q. Where was that company selling its product prior to the time it was purchased?

A. All over the east and south, and as far west as Chicago.

Q. In competition with the American Steel & Wire Company?

A. Very keenly in competition.

Q. And it went out of business?

A. Through high finance.

Q. Are you familiar with the particular transaction that put it out of business, of your own knowledge? I do not want anything unless it is of your own knowledge.

A. Nothing but bad management and over-capitalization.

Q. How do you get your information as to that?

A. I cannot tell you. It was common report.

Q. Then it is just hearsay on your part, is it not?

A. Partially.

Q. What information have you other than hearsay in regard to it?

A. I had friends in the company. I left it before it went into the hands of the receiver.

Q. Those friends told you?

A. Those friends told me.

Q. I stated in the beginning that I did not care for hear say.

MR. LINDABURY: Were you financially interested in it yourself?

THE WITNESS: Yes.

By MR. COLTON:

Q. But you were not financially interested in it at the time it was sold out to the Steel Corporation?

A. I owned stocks of the company.

Q. Then you received stock from the Steel Corporation at the time of its sale?

A. Oh, no. I only owned the common stock, which was valueless at the time of the sale.

Q. You realized nothing on it, then?

A. Absolutely nothing.

Q. Going back to that first rail meeting: I interrupted you as you were going to tell me what was done at that first rail meeting that you attended.

A. The representatives at that meeting discussed all the inquiries for rails that had been received between that meeting and the one prior to that, and a record was kept, and the statistics were forwarded to the various companies.

Q. What are inquiries?

A. An inquiry is a request for quotation by a buyer of steel rails.

Q. A request for quotations?

A. By a buyer of steel rails.

Q. Now, did you have a great many of those requests for quotations?

A. We had some every day, yes, as a rule.

Q. And they would be from different railroads?

A. Different railroads.

Q. And you took those inquiries from the different railroads into this meeting; is that it?

A. We compared notes as to what we had had in the way of inquiries.

Q. What sort of statistics were made up from those?

A. The tonnage required, the name of the railroad or the prospective buyer, and the point of delivery.

Q. If it was standard Bessemer rail it was $28?

A. There was never any question about price.

Q. There was never any question about its being $28 if it was standard Bessemer?

A. That is right.

Q. When the open hearth came in you had an extra on that?

A. I cannot tell you so much about that; we had an extra, but I do not recall very much about it.

Q. Wasn't it $2 a ton?

A. It was in the beginning, yes.

Q. You do not recall how long that extra of $2 a ton continued?

A. No, I cannot; I don't remember.

Q. Were those other meetings in regard to rails of the same general character?

A. They were.

Q. And you kept on taking those inquiries and comparing notes on those inquiries in the meetings?

A. We did for a while, yes.

Q. For about how long did that continue?

A. I cannot remember how long.

Q. Did the Tennessee Company ever join you in those discussions?

A. No, sir; not in our meetings.

Q. The Tennessee Company was sort of outside the pale then?

A. Yes; they were competitive.

Q. And you cannot tell me whether this continued down to the time of the so-called Gary committee meetings?

A. No, sir; I don't remember.

Q. You were not represented on any of the Gary committees, were you?

A. No, sir.

Q. Take the plate meetings; what happened at the first plate meeting you had in 1905?

A. We had this discussion of the various topics that I have mentioned in my answer to that question.

Q. I would like to know just what was stated, so far as you can tell me.

A. I think I described that pretty fully.

Q. I know; I may have forgotten, and I am just trying to get at it. I cannot keep all these things in my mind, and I wish you would tell me just what took place at that first meeting that you attended.

A. The meeting was for the purpose as I have described it.

Q. I don't care about the purpose; I just want to know what was said and done.

A. We had a discussion of business conditions of the time, the trend of the market, and the possibility of an increasing or decreasing consumption, and the possibility of increased buying on the part of the railroads, shipbuilding, and what relation the crops might have in relation to our business, and discussion of the specifications, any new specifications on boiler plate, rails, structural shapes and matters of technical interest.

Q. What was said about the trend of the market?

A. That was very fully discussed all the time, and nearly everyone present gave his views on the situation.

Q. I do not know just what "trend of the market" means. What is that about?

A. The trend of the market is whether prices are likely to go up or down, and whether the consumption is likely to increase or decrease.

Q. Did you ever read any of the trade papers after those meetings?

A. We always read the trade papers.

Q. In discussing the trend of the market, did you discuss the market price, what was considered the market price?

A. Always.

Q. And after those meetings the trade people often got

from you the general consensus of opinion as to what was the market price?

A. They may have got it, but it was not handed to them at all.

Q. Did they ever get it from you?

A. No, sir.

Q. What was stated about prices there? I am referring to the year 1905, you understand.

A. That is rather hard for me to remember, exactly what was done back in 1905 at the first meeting. They are all blurred in my mind; they were continuous meetings as long as they lasted. I cannot tell; one was very much like the other.

Q. Give your best recollection for 1905, what occurred?

A. Each one probably stated, as I recall, what price he was getting for his products; and we stated whether we considered that a fair price or not; and we found a great variety of opinion on prices, and we found that some mills were full of business and some were not so full, and it was a sort of frank, open confession of the situation. I imagine that our competitors in those meetings stated their maximum price, but I doubt very much whether any of them ever stated their minimum price.

Q. You stated your maximum price?

A. In our meetings?

Q. Yes; I do not care about your imagination; I want to know what you did in 1905, you yourself.

A. I stated my going maximum price.

Q. By going price—that would be the price that you quoted without dickering on it; is that it?

A. What do you mean by "dickering"?

Q. Suppose, if I wrote you, being a green person, and asked you for a price on a certain tonnage, you might quote me one price to start with, and if I went in again you might quote me a different price, if I said I could get it for less?

A. If you were a good trader, and I wanted the business, there might be a different price.

Q. By "going price," do you mean the price quoted in the first instance? You said on your direct examination you

quoted a price in the first instance, and sometimes a different price in the second instance?

A. Yes.

Q. Of course you do not know what was in the mind of the others; that was in your mind, that you quoted them the going market price?

A. The average price.

Q. And you found out how much tonnage these companies made?

A. In an approximate way only.

Q. Don't you know at that time that there were reports of tonnage being sent, in regard to plates?

A. We had those at quarterly intervals; we didn't have them at every meeting.

Q. You didn't have reports at every meeting?

A. No, sir.

Q. Who presided at those meetings?

A. Various members at the meetings.

Q. Do you remember attending at one of those meetings a gentleman by the name of Langan, he was with Temple; you were not at one of them where he was there?

A. I think he was at some of the early meetings, yes, sir.

Q. Which ones?

A. I cannot tell you; I do not remember.

Q. He was at the plate meetings, wasn't he?

A. I don't remember.

Q. You do not remember that he was at the plate and structural meetings?

A. I remember seeing him at some meeting. I cannot tell which one it was.

Q. Don't you know he had certain duties with regard to tonnages?

A. Statistics.

Q. Your mind is not so clear as to just what occurred at those early meetings, is it?

A. That is seven or eight years ago.

Q. And you were new in that particular class of product?

A. Yes, sir.

Q. What was the tonnage of the Lackawanna Steel Company in rails when you first went with it—the annual output of the Lackawanna Steel Company when you first became connected with it?

A. It might be put approximately at 500,000 tons annually.

Q. And what proportion of that was shipped abroad in 1905?

A. A very small proportion of it, probably not five per cent.

Q. You know, do you not, that the Lackawanna Company has shipped abroad as high as fifteen per cent.?

A. I have no actual recollection of the percentages. I do not remember.

Q. But that would not be beyond the amount it might be possible for it to have shipped, including Canada and Mexico and all the different countries?

A. I should say that was far above the average.

Q. Above the average for the Lackawanna Company?

A. Yes, sir.

Q. Now, did you ever sell standard Bessemer rails abroad for less than $28?

A. Yes, sir.

Q. Did you usually sell standard Bessemer rails abroad for less than $28?

A. Yes, sir.

Q. Did you ever discuss at those meetings anything about the price of standard Bessemer rails to be sold abroad?

A. No, sir.

Q. There was no generally understood market price for the sale of standard Bessemer rails abroad arrived at in any way?

A. No, sir.

Q. And so far as you know there was not any price during the year 1905 or 1906 as to the price for exportation of standard Bessemer rails?

A. How do you mean, any price; any agreed price?

Q. Any price at which the different mills were shipping?

A. No.

Q. In 1905 you say that you might have gotten out a tonnage of 500,000 tons in rails?

A. That was the capacity of the company. I said approximate capacity. That is what I meant.

Q. Do you know whether the output in 1905 was half the capacity or three-quarters of the capacity, or what it was?

A. It was pretty close to it. I recall one year—it might have been 1906 or 1907, when they sold over 550,000 tons.

Q. Then in 1908 I suppose you would recall that they sold about half the capacity or less?

A. Perhaps 240,000 tons, or possibly less than that; it was much less.

Q. Possibly not more than forty per cent. of the total capacity?

A. Yes, the figures are all given in their annual report.

Q. Yes, but you see we cannot put in evidence all their annual reports, very well.

MR. LINDABURY: You have got it in evidence already.

MR. COLTON: No; we have not in evidence the annual reports of the Lackawanna Steel Company.

THE WITNESS: You have the figures showing the tonnages.

MR. COLTON: It is entirely news to me if we have.

By MR. COLTON:

Q. Now, in 1909, your tonnage in plates and structural and steel products generally was greater than it was in 1908, wasn't it?

A. Yes, sir. 1908 was the lean year.

Q. Do you recall a break in prices in the early part of 1909?

A. Was it 1908 or 1909? There was a severe break there during one year. I do not remember whether it was 1908 or 1909, now.

Q. Well, suppose we take it up by years. The first year you were in there was the year 1905; that was a pretty good year, wasn't it?

A. That was a fair year.

Q. Then 1906 was a fair year?

A. A good year.

Q. And 1907 was a good year up to the so-called panic?

A. The total tonnage of the year was fair, yes, sir.

Q. Then 1908 was a lean year?

A. Yes, sir.

Q. And 1909?

A. The tonnage was better, but prices were lower.

Q. Prices were considerably lower in 1909?

A. Yes, sir.

Q. There was a severe break in the market. I have followed it up in detail so as to bring back to your mind that it was in 1909.

A. I think you are right.

Q. You say you quit attending meetings, these plate and structural meetings, at what time?

A. I could not possibly tell you that. I do not remember.

Q. Did these plate or structural meetings continue until 1908?

A. I do not know; I do not remember.

Q. You do not know whether you attended any meetings subsequent to 1907?

A. No, I do not remember.

Q. Then whatever may have been agreed upon or understood at meetings from November, 1907, on, up to the break in 1909, you would not undertake to say anything that occurred at those meetings?

A. No, sir.

Q. And your testimony does not relate to meetings that took place among manufacturers during that period?

A. No, sir.

Q. How about the period from the fall of 1909 on up to the end of 1910, as to any meetings among certain of the manufacturers that took place at that time; is your mind a blank as to the meetings that took place at that time?

A. I remember nothing very definite about them.

Q. Then it is almost a blank, isn't it?

A. Practically; yes, sir.

Q. Now, here is a committee, one of the so-called Gary committees, "rails and billets, Chairman E. C. Felton, Pennsylvania Steel Company. Other members, E. J. Buffington,

Illinois Steel Company; E. A. S. Clark, Lackawanna Steel Company; T. J. Drummond, Dominion Iron & Steel Company, Limited; Howard Wood, Alan Wood Iron & Steel Company." You never attended a meeting at which any of those gentlemen were present?

A. No, sir.

MR. LINDABURY: I think he had already said that.

MR. COLTON: I did not know that he could be sure of what the different committees were unless I called his attention to the different members.

MR. LINDABURY: I understood him to say that he attended no meetings after 1907, none after the panic.

By MR. COLTON:

Q. Then if anyone attended meetings after the panic it was done by someone else other than you for your company?

A. Yes, sir.

Q. You did consult with your superior officers in regard to prices, I believe you said, in respect to shapes and plates?

A. In larger transactions; yes, sir.

Q. And the small transactions you would frequently quote the going market price?

A. Yes, sir.

Q. Always, practically?

A. Practically always; yes, sir.

Q. Now, in regard to bars; how is it about that? Did you consult with the president in regard to large tonnages there, too?

A. In regard to large tonnages, yes.

Q. Was there any going market price in bars?

A. The same conditions ruled in bars as on shapes and plates.

Q. But I believe you said the variations were very much wider in bars?

A. Very much wider, yes.

Q. There are a great many more bar makers than there are shape makers?

A. Yes.

Q. And considerably more bar makers than plate makers?

A. I think so.

Q. Especially if limited to tank plates?

A. If we include iron bars, there are a great many more bar makers.

Q. Suppose we omit iron bars. The price of steel bars ranges somewhat above the price of iron bars, does it not?

A. Ordinarily, yes.

Q. They command about $2 a ton more?

A. There is a great variation in that. Sometimes it is higher and sometimes it is lower. To-day iron bars are being quoted cheaper than steel bars, in a great many cases. It depends upon the price of scrap.

Q. There are a great many little manufacturers of iron bars, are there not?

A. Yes, sir.

Q. Did you notice during the year 1908 at times that the market was particularly weak in bars?

A. In 1908?

Q. Yes; that lean year, in regard to bars?

A. I cannot remember the range of prices. I do not think the market was any weaker in bars than it was on shapes or plates.

Q. Do you recall the variations in prices in regard to bars during the year 1908?

A. No, I do not.

Q. Do you recall the variations in prices as regards shapes during the year 1908?

A. You said the break in prices occurred in 1909, did you not?

Q. I led you along, and I thought you came to the conclusion that that would be the right date.

A. Having no record before me, I did not pretend to remember exactly.

Q. Suppose we go over that again, and see if we arrive at the same conclusion. The first year you went in business was 1905?

MR. LINDABURY: Shall we not agree that that was the date, Mr. Colton, and go on?

MR. COLTON: Oh, I think so. It is so well known.

MR. LINDABURY: There is no doubt about it, and——

MR. COLTON: I did not want to take it for granted, and——

MR. LINDABURY: You are quite right; but there is no question about the date and therefore it is not worth while to refresh his recollection in regard to it.

MR. COLTON: All right.

By MR. COLTON:

Q. It is agreed that you may accept that as the year, for the reason stated.

(By request, the stenographer repeated the pending question as follows:)

"Q. Do you recall the variation in price as regards shapes during the year 1908?"

A. My answer is no.

Q. You do not recall the variation in price of plates either for the year 1908?

A. No, sir; I do not.

Q. Your recollection on this subject is very general, is it not?

A. It is; yes, sir.

Q. In what business are you now engaged?

A. I am engaged in the steel and wire business at Birmingham, Alabama.

Q. How long have you been engaged in that business?

A. Nearly three years.

Q. Did you testify on your direct examination—I am just asking this for the sake of shortening your cross-examination, as my notes are not sufficient to show me—as to your business in wire? I mean, within this last period?

MR. LINDABURY: No, nothing at all.

THE WITNESS: No.

MR. LINDABURY: He simply testified to the name of the company he was with.

THE WITNESS: That is all.

MR. COLTON: He stopped with the name of the company?

MR. LINDABURY: Yes.

By Mr. Colton:

Q. The name of your company was the Standard?

A. The Standard Steel Company.

Q. Is that the same as the Southern Steel Company?

A. It is the successor of the Southern Iron & Steel Company.

Q. That company has been in the hands of a receiver, or something of that kind, recently?

A. All kinds of trouble.

Q. It is generally in the hands of a receiver?

A. Generally. It is sort of chronic.

Q. That is the chronic state of that company?

A. Yes.

Q. You have had misfortunes with your wire companies?

A. Yes, I have. It is coming out in good shape now, however.

Q. In these discussions that took place in the plate meeting, for example, before you left did you usually have a price that had been named by each of you as the going market price?

A. We sometimes had expressions from all the members as to what price they thought was fair and would continue to use.

Q. They gave an expression of what price they thought was fair and what price they would continue to use?

A. There was no agreement.

Q. I understand.

A. There was nothing binding on any member of that meeting. They went out and frequently made variable prices.

Q. But when you made a statement that you were going to continue to use a price, you meant what you said when you said it, did you not?

A. We meant that would be the average market price; a price level, if you please.

Q. And you intended them to believe that you meant that?

A. That that was a price level, yes, sir. I did not promise to make that price and no other.

Q. Did you ever hear anyone at one of those meetings—

I am now speaking, of course, before November, 1907—did you ever hear anyone at any of those meetings from 1905 down to November, 1907, question anyone for having departed very materially from what he said was going to be his price?

A. Yes, frequently.

Q. That occurred frequently at those meetings, did it?

A. Questions were asked of that kind, yes.

Q. What would be said? Suppose I had made a very material cut, after having made an announcement that my price was going to be so and so in plates. What would occur, perhaps, at the next meeting, if that came to the attention of some of the members?

A. I might say to you that I observed you were very hungry for such and such an order, and went to some extremes to get it——

Q. That is, I had gone to some extremes because I was hungry——

MR. LINDABURY: Wait a minute; do not stop him.

MR. COLTON: I thought he was through.

MR. LINDABURY: No; he was just beginning.

By MR. COLTON:

Q. Go ahead, then, with whatever you were going to add.

A. There was no penalty; there was no punishment; in fact, it was more along the line of a joke than anything else.

Q. You considered it a joke that the other man had sold at a very decidedly different price from that which he had announced as the price at which he intended to sell?

A. We might have felt very peevish about it, but we did not so express ourselves in this meeting.

Q. What would you say to me under those circumstances?

A. Under those circumstances we might tell a man that we knew what he was doing.

Q. You would let him know that he had gone under what he had said was going to be his price?

A. No. He did not say it was going to be his price.

Q. I thought you said at times you announced what was going to be your price.

A. We stated that we considered such and such a price as fair, and what the market ought to be; but no man went out of those meetings agreeing to maintain that price.

Q. Oh, no. There was no agreement, of course. I did not mean that. You misunderstood me. I understood you to say, however, a moment ago, that while of course there was no agreement to maintain a price, that you did at times state that you were going to keep to what you called a going market price, and that you intended to do what you said.

MR. LINDABURY: Oh, no.

THE WITNESS: And we hoped the other fellow would be a good enough fellow to do the same thing.

By MR. COLTON:

Q. He was under no legal obligation to do it?

A. Nor any obligation.

Q. But if you had not intended to do what you said, you would have thought you were not dealing quite fairly with the other people?

A. Not at all.

Q. Do you mean that if you got up and said something that you did not intend to do——

A. But I did not say I was going to do so and so positively and absolutely.

Q. You said you intended to keep to a certain price, did you not?

A. When we discussed the price question in those meetings, we concluded that the conditions were such as to justify a certain approximate price level.

Q. Yes; I understand.

A. I do not know that I can say it any better than that.

Q. Now, when you said you were going to quote at that approximate price level, you had in your mind a certain leeway, did you not?

A. No; I did not have any leeway. That would depend upon circumstances that might arise after the meeting.

Q. But when you made that statement you intended to do it, did you not?

A. We intended to maintain approximately that price level.

Q. That was your intention, and you haven't any reason to believe that these other men were not equally honest in their statement as to general intentions?

A. I could not answer that at all.

Q. Well, some of them you felt were of such a character that you could not pay any attention to their statements?

A. May I add this? When pig iron is selling at $14.50 a ton, a fair spread on steel prices might be discussed and considered at these meetings. When pig iron is selling at $26 a ton we consider some other spread or advances in price on steel products. That is what I meant by discussion of price levels. We took into consideration the cost of the raw material, pig iron, coal and coke, and all of those factors in making up the cost of our product.

Q. That is the way you arrived at this price that you considered fair?

A. In general terms.

Q. And then, after having arrived at such a price in general terms, and stated that such and such was going to be your going market price, you intended to follow that yourself?

A. I want to correct you in indicating or implying that there was any lack of honor on my part or the part of any of those attending those meetings.

Q. Will you answer my question first, and correct me afterwards?

(The question was repeated by the stenographer.)

THE WITNESS: You mean absolutely and literally?

By MR. COLTON:

Q. No, in the way that you said, that it would be your going market price.

A. I said in a general way. I did not agree that I would maintain that particular price and neither go lower nor higher.

Q. But you intended to stick about that price that was arrived at in this way?

A. That "about" might be very elastic.

Q. If there was a substantial variation from that price, you stated a moment ago that you might on occasion feel very peevish about the man that had made that substantial cut?

A. Yes.

Q. And then, when you felt very peevish about it, you restrained your feelings to a considerable extent?

A. But let him know that we knew what he was doing.

Q. You let him know that you knew what he was doing?

A. The trouble was that we knew it after the event.

Q. He did not always notify you beforehand in regard to that?

A. No, sir.

Q. Did you ever notify any of these other people that although you had at the meeting arrived at this going market price that you referred to, in the way that you referred to having arrived at it, that the conditions were such that you felt that you could not continue your general line, or that you must make substantial cuts?

A. I do not recall ever having been in that position.

Q. Then you do not remember of having been in such a position where having arrived at such a price you felt it incumbent upon you to make a substantial cut from what you had stated?

A. "Substantial" might be comparative.

Q. Wasn't it in your own hands? I understand that you had a certain leeway there, anyway, even from the point of view of what you stated you intended to do?

A. I do not think I notified any of our competitors what I was going to do.

Q. Do you ever recall having made, after such an announcement, a substantial cut in price before the next meeting? If so, give the occasion.

A. I cannot give the occasion; I do not recall specific instances, but I do know that prices were variable——

Q. (Interposing.) I didn't ask you that.

MR. LINDABURY: Let him finish.

MR. COLTON: I think I can suggest to him that he has not answered my question.

MR. LINDABURY: But he is answering your question, and on the very threshold you stop him, if you see that the answer is not coming your way.

MR. COLTON: Read him the question; it is not an answer to my question at all.

MR. LINDABURY: Read the question. I will have to appeal to the Master to exercise his authority to allow the witness to proceed unrestrained to the end.

MR. COLTON: Read the question and the answer. I wish you would pay attention to the questions and answer, and make any explanation afterwards, after you have answered the question.

MR. LINDABURY: Read the question and the part of the answer that was not suppressed.

(The question and answer were repeated by the stenographer.)

THE WITNESS: And following the law of trade, that the larger with the more desirable business is likely to receive a favorable price.

MR. COLTON: Now, I object to the answer as not an answer to my question, because I asked what you did; I did not ask anything about what other people did, but I asked what you did. Read it again.

(The question was again repeated by the stenographer.)

THE WITNESS: I do not remember any such instance.

By MR. COLTON:

Q. You do not recall any one's having ever spoken to you about having gone under the price that you announced at the previous meeting?

A. I certainly do.

Q. Can you state what they stated to you?

A. They said to me a good deal the same as I said to them when they did the same.

Q. What did they say to you, do you remember?

A. I really cannot remember that.

Q. You do not remember the exact words?

A. I do not.

Q. And you do not know what reply you made?

A. I do not.

Q. You haven't any idea what kind of a reply you made?

A. I either told the truth about it or said nothing.

Q. Was that the usual custom, for a man to either tell the truth about it or say nothing?

A. That was my custom.

Q. If you had any explanation you gave it?

A. I did.

Q. And there were frequently explanations given, were there not?

A. There were a good many explanations in some of those meetings.

Q. Some of those explanations you didn't believe, I suppose?

A. I had grave doubts.

Q. What was your plate manufacture in 1905 in tonnage? You gave it for rails.

A. 85,000 tons annually, possibly.

Q. That would be true practically of the period 1905 to 1910?

A. I am a little in doubt about that; it was somewhere between 5,000 and 8,000 tons per month. I can't remember.

Q. As nearly as you can recall it would run about that during that period?

A. Yes; I should think so.

Q. Of course varying with the good years we have spoken of and the bad years, in about the percentage we have discussed?

A. Yes.

Q. Now, what was your output in structural steel?

A. In structural steel from 12,000 to 15,000 tons per month.

Q. And that would run in about the same way as regards the different years?

A. Yes, sir.

Q. And in bars what was your output?

A. About 50,000 tons a year.

Q. And in all other steel products, now is that too much of a strain on you, to ask you that?

A. I could not remember that.

Q. But have I covered your most important products?

A. Yes.

Q. I have covered rails?

A. Yes; we sold some semi-finished material in billets and slabs.

Q. About what tonnage would you sell in billets?

A. Not a great deal, 20,000 tons.

Q. Did you sell any sheet and tin plate bars?

A. Yes; in sheet and tin plate bars the tonnage was considerable.

Q. About what was your tonnage?

A. The maximum tonnage of any one year was over 200,000; 208,000 tons, if I remember rightly.

Q. Of course if you put it in semi-finished product you come down in the finished product, don't you?

A. Not necessarily. In lean years we try to sell semi-finished, and in good years the demand for finished material is so good as to leave not much surplus for semi-finished material.

Q. Could you give me approximately your output in 1905; that is, if you have it pretty well in mind; I do not care for it if it is just a mere guess.

A. You mean the total output?

Q. Yes. In rolled products.

A. It was between eight and nine hundred thousand tons, if I remember rightly.

Q. And in 1906?

A. It was more.

Q. And in 1907?

A. About the same. They ran between 900,000 and 1,000,000 tons, I think.

Q. And in 1908 it was probably about fifty per cent. of that. That was the bad year. That was the lean year?

A. That was a bad year. It went down to under 500,000 tons, I think.

Q. How much?

A. Less than 500,000 tons.

Q. And in 1909?

A. That I do not remember.

Q. It was up again considerably over 1908?

A. Yes, sir. The figures are all available, you know, in their annual report.

Q. Yes, I understand that, as to other things. And in 1910, approximately?

A. That was a pretty good year. That was nearly a million tons, I think.

MR. COLTON: That is all.

REDIRECT EXAMINATION

By MR. LINDABURY:

Q. You spoke of the Shelby Company. Did that manufacture under a patent or not?

MR. COLTON: Just a moment. I object to this witness testifying in reference to a patent. He is not shown to have any knowledge in reference to the various patents under which it may or may not have manufactured, or be technically trained at all.

THE WITNESS: We operated under the Mannesmann patent.

By MR. LINDABURY:

Q. That was a patent for what?

A. That was a patent for piercing the solid billet preliminary to expanding and drawing the seamless tubing.

Q. Were there any other patents in operation in this country for making seamless tubes, if you know?

MR. COLTON: I object on the ground that the witness is not shown to be qualified to testify in reference to all the various patents that may be in existence in reference to the manufacture of seamless tubes.

THE WITNESS: During the time of the Shelby Steel Tube Company there was a concern operating under the name of the Standard Steel Company, or Tube Company, as I remember, at Elwood City, and were attempting to produce seamless tubes under some other patent, or with some other machine than ours, and as I recall it not at all successfully.

By Mr. Lindabury:

Q. Was there any successful process at that time under which seamless tubes were being manufactured except that which you controlled?

Mr. Colton: Just a moment. It is not shown that this witness has any knowledge as to whether those seamless tube mills to which he refers had successful plants or not. I object to the witness answering in regard to matters that are certainly hearsay. He is not shown to have examined the mills or to have any personal knowledge in reference to them whatsoever.

The Witness: I visited the mills of the Standard Tube Company and saw them making tubes by their process and with their machines. Furthermore, those machines were accurately described to us through our own representatives who visited the plant, other than me, and by the representatives of the company who at one time tried to make a consolidation with the Shelby Company, so that we felt that we understood very fully how they were operating.

By Mr. Lindabury:

Q. Now, could you answer my question as to whether there was any successful process except that for which you held a patent then in use for making seamless tubes?

A. There was no other successful process.

Q. Except your own?

A. Except our own.

Q. You spoke of there having been a great deal of competition in steel rails notwithstanding this price for Bessemer rails of $28. What was the character of that competition?

A. I might explain that by saying that while the price of $28 on standard steel rails was at the mills, the delivered price was always made to the buyer by adding the rate of freight to be obtained either all rail, all water, or water and rail, canal boat or otherwise, and I recall very well that our freight department was very busy about rates upon which to make quotations, and the prices made by any two or more mills might show a great variation, a wide range in delivered prices. Now, the competition was not only in that, but there

was the competition resulting from the various claims as to quality, success in the wearing of the rails, and specifications as to manufacture, and again there were considerations on the part of the buyer as to reciprocal business, all of which made decided competition, and had to be recognized and handled accordingly.

Q. Tell me whether or not these steel meetings that you speak of as pending in 1905 and 1906 were accompanied by a dinner or luncheon ordinarily?

A. They were not.

Q. They were not?

A. No, sir.

Q. Were they held in one place or in different places?

A. They were held in various places.

Q. According to the convenience of the members?

A. Yes.

Q. You spoke of difficulties that the New Haven concern was in, resulting in a receivership and the sale of its plant; was that sale made by the receiver?

MR. COLTON: I object to the question on the ground that the witness is not competent to testify in regard to that, the sale being a matter of record, and he is not shown to have been a party to the sale in any way, and in fact had no interest in the sale at the time it was made, and his testimony is not the best evidence.

THE WITNESS: It was made by the receiver.

By MR. LINDABURY:

Q. Did the attitude or conduct of the Steel Corporation or any of its subsidiaries bring about the financial trouble that that company became involved in?

MR. COLTON: Objected to on the ground that it is not shown that the witness was connected with the company at the time of the sale, and therefore is not competent to answer in respect to what brought about the sale, and that as to the other time it has not been developed just what his connection with the company was.

THE WITNESS: My connection with the company was that of vice-president and general manager. The difficulties into

which the New Haven Corporation got were in no sense due, in any connection, to any action on the part of the U. S. Steel Corporation subsidiaries. In fact, before the time of the attempted consolidation of the Safety Company, the Safety Insulated Wire & Cable Company with the New Haven Company, we were going along splendidly and making money, and were developing our plants in fine shape. We had no trouble with the American Steel & Wire Company, with their competition, and were not hindered or hampered in any way whatever, and our troubles were due solely to bad management and bad finance.

By Mr. Lindabury:

Q. Was the competition of the Steel Corporation with that company or with the Lackawanna Company or with any other company you ever were connected with unfair in any respect?

Mr. Colton: I object on the ground that the question calls for a conclusion of the witness upon a complicated state of facts that may exist in the witness' own mind, but is not disclosed to the court.

By Mr. Lindabury:

Q. Now you may answer.

A. I have always regarded the competition of the Steel Corporation's subsidiaries as the fairest competition that we have.

RECROSS EXAMINATION

By Mr. Colton:

Q. You spoke of certain patents connected with some subsidiary of the Steel Corporation——

Mr. Bolling: No, Mr. Colton, not a subsidiary of the Steel Corporation, but the Safety Insulated Wire & Cable Company.

Mr. Colton: I think you had better not interrupt, Mr. Bolling. I had not finished my question.

By Mr. Colton:

Q. I will say that at least I understood you to say taking up the question of consolidation of the Standard Company with the Shelby Company?

A. No; you are wrong there. That was the New Haven Wire Company and the Safety Insulated Wire & Cable Company I was discussing then.

Q. I know, but when you were talking about the Shelby Company, you were speaking about it, and whatever information you may have had as to the patent of other companies, you spoke of certain people connected with the Standard Company, or connected with an attempted consolidation, did you not, of the two companies?

A. They approached us on the point of either selling out to us or making a consolidation of the two companies.

Q. Who do you mean by "they"?

A. The officers of the company at that time; of the Standard Company.

Q. The officers of the Standard Company approached you?

A. Yes.

Q. That occurred about what time?

A. That must have been in the fall or winter of 1900; in the fall of 1900 or the winter of 1900 and 1901.

Q. Your information, then, relates to that period, as to the condition——

A. Up to the time that the property was sold to the United States Steel Corporation.

Q. They gave you certain information about that plant at that time and their patents?

A. Oh, yes, indeed.

Q. What time did you visit that Shelby mill?

A. I cannot remember now.

Q. You could not give the year at all, could you?

A. I don't know whether it was 1900 or 1901.

Q. How many times did you visit it?

A. Once.

Q. You visited it just once?

A. You are talking about the Elwood mill, are you not?

Q. I am talking about the different seamless mills in this country.

A. We are discussing the Standard mill at Elwood City, Pennsylvania.

Q. Very well; go back to the Standard, then. You visited that mill just once?

A. Once.

Q. You do not know what changes were made after you were there, of course?

A. No, sir.

Q. You have no knowledge on that?

A. No. I probably did know, but it has escaped my mind since then.

Q. The best of your recollection is that you visited it in 1900?

A. Or 1901.

Q. Did you inspect any other mill than that particular one of the National Tube Company?

A. There were no other seamless tube mills in the country except those owned by the Shelby Steel Tube Company.

Q. You do not know, then, if it is a fact that there were two mills prior to the acquisition of the Shelby Company by the United States Steel Corporation.

A. Oh, yes; I knew about that. There was a concern in Detroit.

Q. Just a moment. I had not finished.

You do not know, then, if it is a fact that there were two mills prior to the acquisition of the Shelby Company by the United States Steel Corporation, belonging to the National Tube Company?

A. I knew they had been making some experiments, but I did not know how far they had gone.

Q. You do not know how far the National Tube Company had succeeded in its seamless work?

A. They had put nothing on the market.

Q. You did not know that they had taken large orders?

A. With the intention of selling them at Elwood City?

Q. Before the acquisition of the Shelby at all, did you not know they had taken large orders?

A. I could not say that I knew they had taken large orders, no.

Q. Did you know anything about it one way or the other?

A. I knew that they had made some experiments with

seamless tubing, but I did not know how far they had gone; certainly they had never had their product on the market.

Q. You did not know whether they were in a condition to put it on the market at the time or not?

A. No, sir; I did not know. I do not think they were.

Q. But you do not know?

A. I do not know; no, sir.

Q. Did you inspect the various patents that they had?

A. No, sir.

Q. You do not know what different patents they may have had?

A. I do not know what patents they had; no, sir.

Q. How many patents did your company have, if you know?

A. I don't know.

Q. You have never made any special study of the patents, have you?

A. Not of the patents; no, sir. I did of the tubing.

MR. COLTON: That is all.

MR. LINDABURY: That is all.

(Whereupon an adjournment was taken until Tuesday, November 11, 1913, at 10:30 o'clock a. m.)